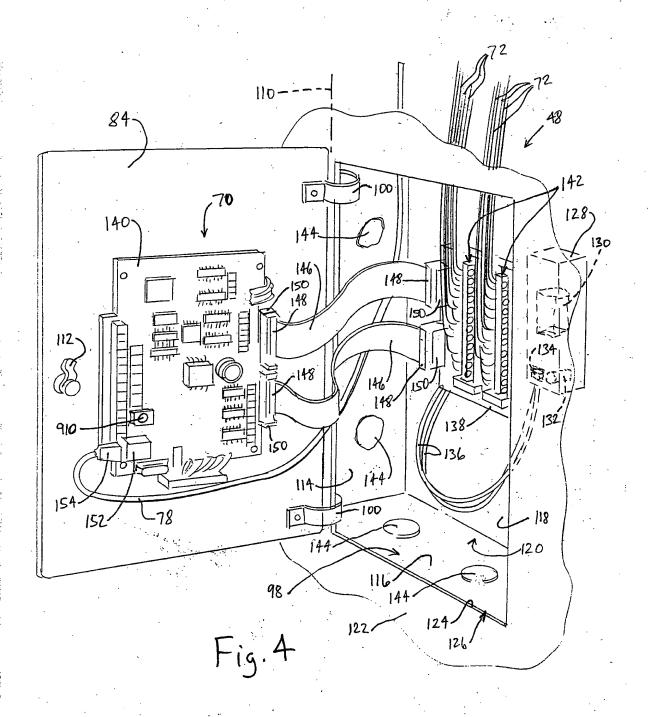


Fig.3



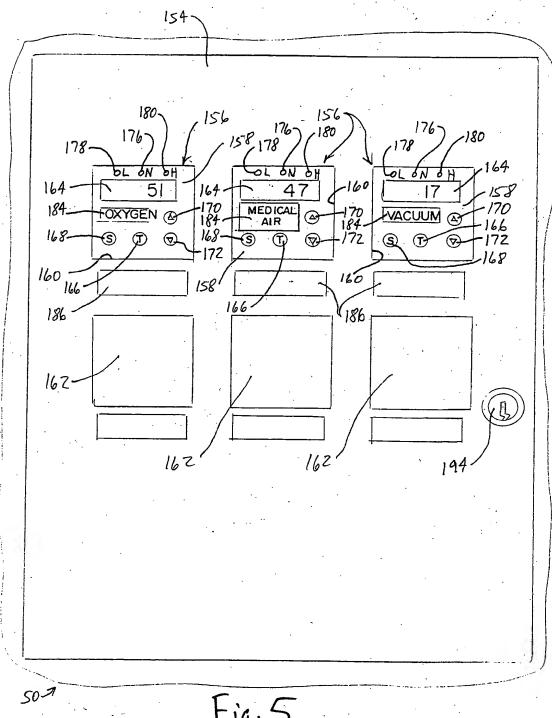
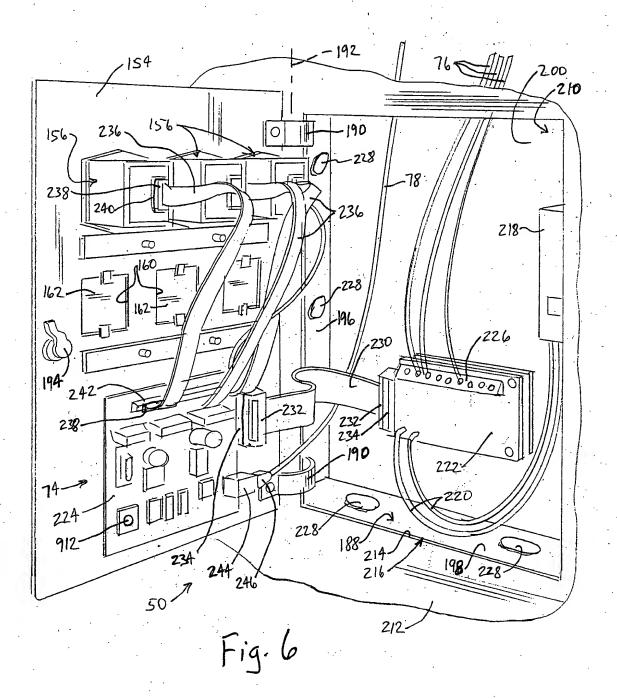
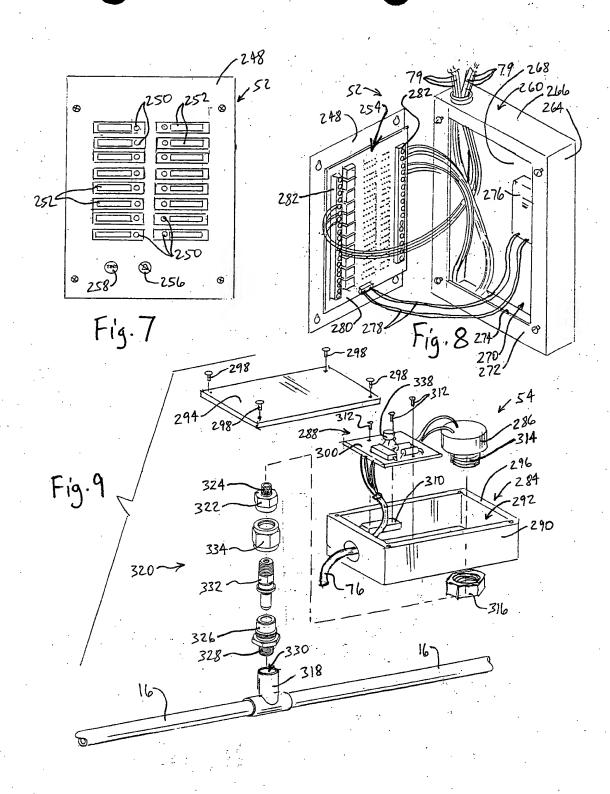


Fig. 5





340 Master Alarm Home 342 This page is served from a Master Alarm View Master\_ Home Alarms
Network Devices View active alarms Device Information
Event Log View detailed information from Areas View information about this Master Alarm Setup Master 354 View log of events Event Log 1356 <u>Login</u>← Troubleshooting assistance Log-in and Setup Setup this device, access limited Diagnostics Diagnostics 356 354-

Fig. 10

360

Master Alarm Active Alarms Data at 23-Jul-2001 17:55:59 Refresh 4 368 View Master 366 <u>Home</u> <u>Alarms</u> Source Alarms Network Devices Device Information Event Log Gas Type Message System Silenced Number Flooded 1 . No 2 Sump Pump Reserve Supply Low 5 No 17· Nitrous Oxide Setup Master 364 Login Area Alarms Diagnostics Silenced Area Dir Gas Type Value Zone Floor Alarm Diagnostics UnderRange 0 ER 1 North No Nitrogen No Wiring OR East Nitrogen Help

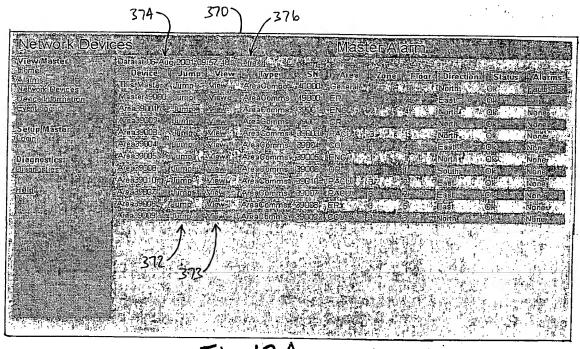
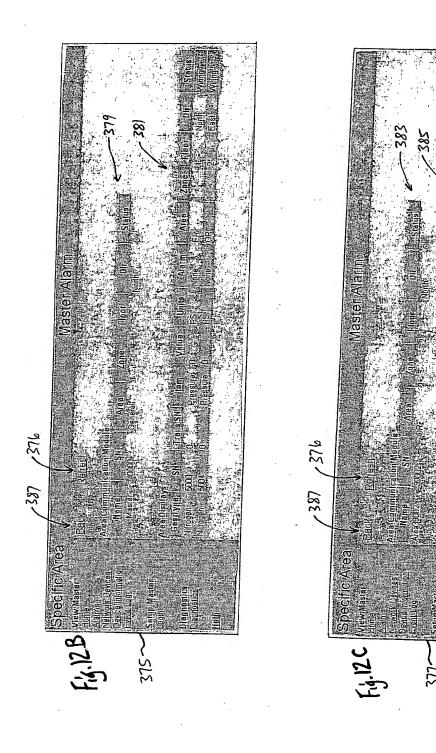


Fig. 12A

<del></del>		<u> </u>
Device Infor	Device Information	
View Master Home Alarms Network Devices Device Information	Type Serial Number Model Number	Master Alarm Master Alarm 10013
Event Log	Software Version	HRMM-0000-0000 0.37
Setup Master Login	Software Build Current Time	024 28-Jun-2001 13:33:39
Diagnostics Diagnostics	Date Code Name	Week 23, 2001 Master10013
<u>Help</u>	Location Zone	PBX 1
	Floor	1
	Direction IP Address	South 192.168.1.100
	MAC Address	00:03:aa:00:00:13

Fig. 13



Event I	Log 394	Master Alarm
View Maste Home	r	Refresh Data at 28-Jun-2001 13:33:55 - 392 396
Alarms Network Dev	388~:	To save as a file, right click here and select 'Save Target As'
Device Infon Event Log		<ul> <li>27-Jun-2001 15:04:37 - Remote Fault Occured - Nitrogen Fault OR 1 Floor 1 East</li> <li>27-Jun-2001 15:04:37 - Remote Alarm Occured - Nitrogen Failed 0 OR 1 Floor 1 East</li> </ul>
Setup Maste Login	er 389—;	→ 27-Jun-2001 15:04:45 - Remote Fault Cleared - Nitrogen Ok OR 1 Floor 1 East 27-Jun-2001 15:04:45 - Remote Alarm Cleared - Nitrogen 0 OR 1 Floor 1 East 27-Jun-2001 17:41:38 - Checksum Ok
Diagnostics Diagnostics		27-Jun-2001 17:43:01 - Power-up 27-Jun-2001 17:43:02 - Daily Checksum INCORRECT 27-Jun-2001 17:43:59 - Remote Alarm Occured - Nitrogen High 130 OR 1 Floor 1
Help	390	East 27-Jun-2001 17:45:17 - Power-up ▶27-Jun-2001 17:45:17 - Daily Checksum INCORRECT 27-Jun-2001 17:45:19 - Remote Alarm Occured - Nitrogen High 0 OR 1 Floor 1
	3& <del>&gt;</del>	East 27-Jun-2001 17:47:32 - Stack Shutdown - code: 1 27-Jun-2001 17:47:33 - Daily Checksum INCORRECT 27-Jun-2001 17:47:35 - Remote Alarm Occured - Nitrogen High 130 OR 1 Floor 1
		East 27-Jun-2001 17:48:44 - Remote Alarms Silenced 27-Jun-2001 17:49:01 - Remote Area Ethernet Lost Comms11 28-Jun-2001 07:35:42 - Alarm 1 Activated, Medical Air, Low Line Pressure, System 28-Jun-2001 07:35:42 - Daily Checksum INCORRECT
		28-Jun-2001-07:37:10 - Remote Area Ethernet Lost SN1051 28-Jun-2001 07:45:01 - Power-up 28-Jun-2001 07:45:01 - Daily Checksum INCORRECT 28-Jun-2001 07:45:41 - Alarm 3 Activated, Oxygen, Low Line Pressure, System 1
	390	20-Jun-2001 07:45:43 - Naim 4 Activated, Oxygen, Resrv. Supply in Use, System 1 • 28-Jun-2001 07:45:48 - User 'new' logged in • 28-Jun-2001 07:48:18 - Power-up
	390	28-Jun-2001 07:48:19 - Alarm 2 Activated, Sump Pump, Flooded, System 1 28-Jun-2001 07:49:46 - Remote Area Ethernet Lost SN1051 28-Jun-2001 07:54:38 - Power-up
	- D -	28-Jun-2001 07:56:30 - Alarm 9 Activated, WAGD, Thermal Shutdown, System 1 28-Jun-2001 07:56:40 - Alarm 10 Activated, WAGD, Service Required, System 1 28-Jun-2001 08:13:59 - Alarm 11 Activated, WAGD, Backup Vac. Pump On, System 1
	382-	384 T 1 1 A

356	
Diagnostics 400  View Master Home 344  Use selections to the leading to the leadi	Master Alarm
Setup Master 354 Login 420  Diagnostics Download Configuration Network Statistics 412 Physical Inputs 414	
Help - 358	·

422-

Download Configuration Master Alarm

View Master Home To save the alarm configuration to a file on your computer: Right click here and select "Save Target As..."

Setup Master Login To view the alarm configuration:

Click here Click here

Diagnostics Download Configuration Network Statistics
Physical Inputs

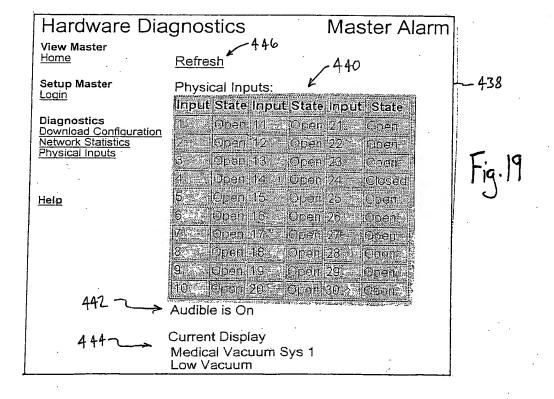
Help

Fig. 16

## Master Alarm - Device Configuration Master Alarm Configuration Summary Device Name - Master10013 Location - no location Language - English Alarm Silence - never IP Addressing - DHCP, Auto IP, Fixed Firmware version - 0.37 Alarm 1 - Medical Air, Low Line Pressure, led=1, sytem=1 Alarm 2 - Medical Air, Compressor Malfunc., led=1, sytem=1 Alarm 3 - Oxygen, Low Line Pressure, led=2, sytem=1 Alarm 4 - Oxygen, Resrv. Supply in Use, led=2, sytem=1 Alarm 5 - Oxygen, Resrv. Supply in Use, led=2, sytem=1 Alarm 5 - Oxygen, Low Line Pressure, led=2, sytem=2 Alarm 6 - Oxygen, Resrv. Supply in Use, led=2, sytem=2 Alarm 7 - Medical Vacuum, Low Vacuum, led=3, sytem=1 Alarm 8 - Medical Vacuum, Service Required, led=3, sytem=1 Alarm 9 - WAGD, Thermal Shutdown, led=4, sytem=1 Alarm 10 - WAGD, Service Required, led=4, sytem=1 Alarm 11 - WAGD, Backup Vac. Pump On, led=4, sytem=1 Alarm 12 - Unused Alarm 13 - Unused Alarm 14 - Unused Alarm 15 - Unused Alarm 16 - Unused Alarm 17 - Nitrous Oxide, Reserve Supply Low, led=3, sytem=5 Alarm 18 - Unused Alarm 19 - Unused Alarm 20 - Unused Alarm 21 - Unused Alarm 22 - Unused Alarm 23 - Unused Alarm 24 - Unused Alarm 25 - Unused Alarm 26 - Unused Alarm 27 - Unused Alarm 28 - Unused Alarm 29 - Unused Alarm 30 - Unused

Fig. 17

Network Stati		Master Alarm	7
View Master Home	Refresh 436		
	IP Address	192.168. 1.100	
Setup Master Login	Subnet	255.255.255. 0	•
seam	Gateway	192.168. 1. 1	
Diagnostics	Fixed IP Address	192.168. 1. 1	
Download Configuration Network Statistics	Fixed Subnet	255. 0. 0. 0	
Physical Inputs	Fixed Gateway	0. 0. 0. 0	1
	Mac Address	00:03:aa:00:00:13	
	Receives	354	1 tia 18
<u>Help</u>	Unicasts	332	119.10
	Multicasts	0	
•	Broadcasts	22	L
	Rx Errors	0	7-434
	Rx Missed	0	
	Rx CRC Errors	0 .	-
	Rx Drops	0 .	
	Transmits	603	:
	Buffer Defers	0 _	
	Tx Errors	0	
	Tx Collisions	0	
	Tx Coll. Overflow	0	1
	Tx FILO Errors	0	
	Traffic Backoffs	0	



	736
Login	Master Alarm
View Master Home Alarms Network Devices Device Information Event Log	User Name new Password  Password
Setup Master Login	Stimite 462
Diagnostics Diagnostics	
Help	

Fig. 20

464	
Logged In 469	Master Alarm
View Master 470 Logout->Home You are logge	ed in as new 466
Setup Master Setup Alarm Messages 474 Setup Device 476 Email Notification 476 Set Clock 478 Administer Users 482 Clear Network 484 Update Flash 486 Transfer Setup 488 Logout 490 Help 4358	-

Fig. 21

Alar	m Mess	sage Setu	р	Master Alarm		
View N Home	laster 494 -	Click on t	he number to d	change an alarm mess	sage.	
	Master Narm Messac	Alarm Input	Gas Type	Message for Condition	LED	System
Setup I	Device	<u> 1</u>	Medical Air	Low Line Pressure	1	1
Email N Set Clo	lotification ck	<u>2</u>	Medical Air	Compressor Maifunc.	1 .	1
Admini:	ster Users	. <u>3</u>	Oxygen	Low Line Pressure	2	1.
	<u>letwork</u> letwork	<u>4</u>	Oxygen	Resrv. Supply in Use	2	1
Update	Flash	<u>5</u>	Oxygen	Low Line Pressure	2	2
Iransfe	r Setup	<u>6</u>	Oxygen	Resrv. Supply in Use	2	2
<u>Help</u>		· <u>7</u>	Medical Vacuum	Low Vacuum	3	1
		8 .	Medical Vacuum	Service Required	3	1
		· <u>9</u>	WAGD	Thermal Shutdown	4	1
	•	<u>10</u>	WAGD	Service Required	4	1
		. 11	WAGD	Backup Vac. Pump On	4	1
		<u>12</u>	Unused	Unused	· 0	1
		13 جر	Unused	Unused	0	1
	1916	<u>14</u> خ	Unused	Unused .	.0	1
	. 417	→ <u>15</u>	Unused	Unused	0	1
		<u>16</u>	Unused ·	Unused	0	1
•	494~	<u>→&gt; 17</u>	Nitrous Oxide	Reserve Supply Low	3 .	5
		<u>18</u>	Unused	Unused	. 0	1
		. <u>19</u>	Unused	Unused	0	1
		20	Unused	Unused	0	1
		<u>21</u>	Unused	Unused	. 0	1 .
		22	Unused	Unused	0	1
	•	23	Unused	Unused	0	1 .
		24	Unused	Unused	0	1
		25	Unused	Unused	0	1
		<u>26</u>	Unused	Unused	0	1
		27	Unused	Unused	0	1
•		28	Unused	Unused	0 .	1
	100	<u>29</u>	Unused	Unused	0 *	1
	494	<del>→&gt;</del> <u>30</u>	Unused	Unused	0	1

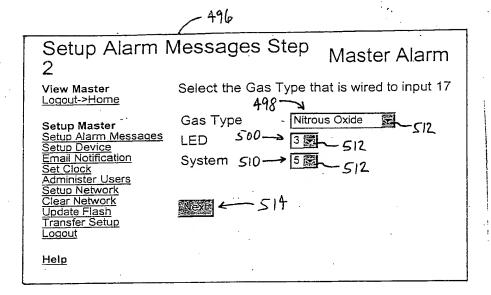


Fig. 23

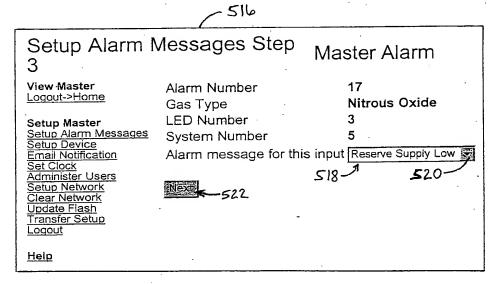


Fig. 24

Setup Alarm Messages Final Master Alarm	:
View Master Changes complete  Logout->Home	
Setup Master Setup Alarm Messages Setup Device Email Notification Set Clock Administer Users Setup Network Clear Network Update Flash Transfer Setup Logout  Input Number 17  Gas Type Nitrous Oxide  Reserve Supply Low Setup Number 3  System Number 5  System Number 5  Return to Alarm Messages  Return to Alarm Messages	
Help	
526 Fig. 25 L524	
Setup Device 528 Master Alarm	
View Master Device Name Master10013	_
Setup Master Setup Alarm Messages Setup Device Email Notification Set Clock Administer Users Setup Network Clear Network Update Flash Transfer Setup Location 530 PBX  532  534  534  South 536  South 540  Silenced return time never Setup Logout  544  Silenced return time never Setup Logout  544  Silenced return time never Setup Logout  544  Silenced return time never Setup Logout	
Fig. 26 548	
Device Setup Accepted Master Alarm	
View Master Logout->Home Changes to device setup were accepted	. !
Setup Master Setup Alarm Messages Setup Device Email Notification Set Clock Administer Users Setup Network Clear Network Update Flash Transfer Setup Logout	
Help	

Fig. 27

Email Notifica	tion ss4 Master A	Jarm
View Master Home  Setup Master Setup Alarm Messages Setup Device Email Notification Set Clock Administer Users Setup Network Clear Network Update Flash Transfer Setup Help	SMTP Server   smtp.hospital.com   SMTP Server   Address   Email 558   FacilityEngineer@hospital.cor   Address 1   Email 560   Address 2   2125554444@pager.com   Email Address 3   Submit   Reset   Indisant Server Address   Indi	Example: smtp.hospital.com  Altername to name: NNN.NNN.NNN  Example: joe_service@hosital.com  Leave blank if unused  Leave blank if unused  Leave blank if unused

	-568	•
Email Changes Accepted  View Master 570		Master Alarm
Setup Master	SMTP Server Name SMTP Server Address	smtp.hospital.com
Setup Alarm Messages Setup Device Email Notification Set Clock Administer Users Setup Network Clear Network Update Flash Transfer Setup	Email Address 1 Email Address 2 Email Address 3	FacilityEngineer@hospital.com 2125554444@pager.com
<u>Help</u>		·

Fig. 29

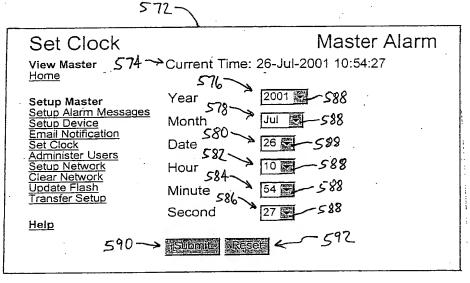


Fig. 30

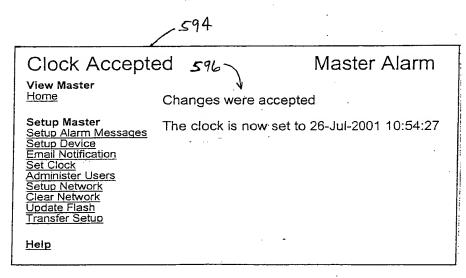


Fig. 31

•	S98		
User Administration		Master Alarm	
View Master Logout->Home	These entries ar	re_case sensitive	
Setup Master Setup Alarm Messages Setup Device Email Notification Set Clock Administer Users Setup Network Clear Network Update Flash Transfer Setup Logout	User 1 Name User 2 Name User 3 Name Submits Reser	User Name    new	Password  0 1
Help 670	617	· •	
	Fig. 32	2	

		616	· ·
User Name C Accepted	hanges		Master Alarm
View Master Home	Changes to	o user nam	ne and password were accepted
Setup Master Setup Alarm Messages Setup Device Email Notification Set Clock Administer Users Setup Network Clear Network Update Flash Transfer Setup		-	
Help			· <u>-</u>

Fig. 33

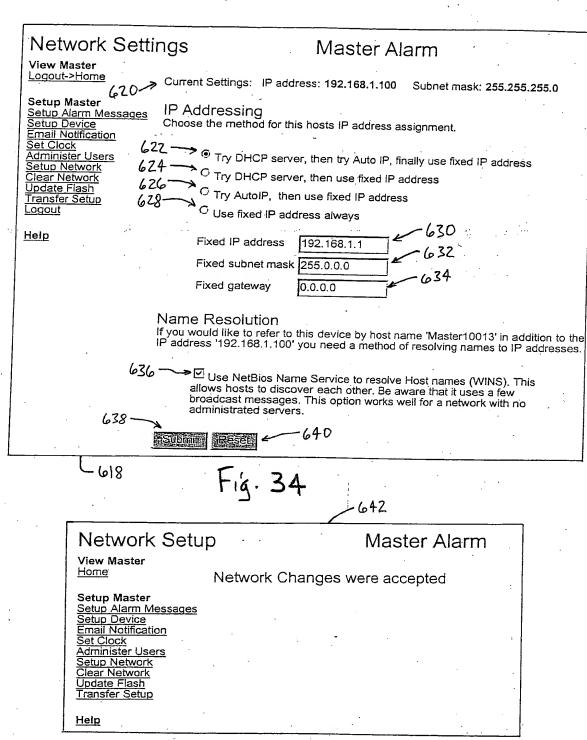


Fig. 35

angalik di Sara Mangalik dan Manah dan

Clear Network	<	Ма	ster Ala	arm	
View Master Logout->Home	This operation	on refreshes the	-	V 612	
Setup Master Setup Alarm Messages Setup Device	Clear the net	twork if any device the list of expec	ce is remo	ved or swapped.	out. urrent setup
Email Notification Set Clock	To clear the	network <u>Click He</u>	<u>ere</u>		•
Administer Users Setup Network Clear Network	· · ·	648 )			
Update Flash Transfer Setup Logout					
Help					
L644	F	ig. 36			

1588

Changes Accepted Master Alarm
View Master
Home Changes were accepted

Setup Master
Setup Alarm Messages
Setup Device
Email Notification
Set Clock
Administer Users
Setup Network
Clear Network
Update Flash
Transfer Setup

Help

## Software Update

654

## Master Alarm

View Master Logout->Home This device has updateable FLASH program memory. The memory can be updated with a new version of application software using a special program on your computer. Once the device enters the FLASH programming mode, new software must be downloaded from a PC.

Setup Master
Setup Alarm Messages
Setup Device

Setup Device Email Notification Set Clock Administer Users

Administer Users
Setup Network
Clear Network
Update Flash
Transfer Setup
Logout

The download process must be completed successfully before this device will work correctly again.

Click here to enter the FLASH programming mode

658

Help

Fig. 38

-657

660-

## Verify FLASH Download

Master Alarm

Mode

Verify your intention

View Master Home

Once FLASH programming mode is entered the device will not operate as an alarm system until the download is successfully complete.

Setup Master Setup Alarm Messages Setup Device

Setup Device
Email Notification
Set Clock
Administer Users

Setup Network Clear Network Update Flash Transfer Setup Click here to confirm entering FLASH programming mode

662

<u>Help</u>

ekan ji kakibe

Barrier Sall

		· · · · · · · · · · · · · · · · · · ·
Configuration	Transfer	Master Alarm
View Master Logout->Home	The configuration from master over the network	this device can be transferred to another
Setup Master Setup Alarm Messages Setup Device Email Notification Set Clock Administer Users	To transfer the configure on the master below.  This Master Alarm is:	ation from this Master Alarm to another, clic
Setup Network Clear Network Update Flash Transfer Setup Logout	Transfer configuration to No other Masters Alar	0: 670
Help		
664	Fig. 41	)

672 Master Alarm Logout View Master
Home
Alarms
Network Devices
Device Information
Event Log Logged out of setup. Setup Master Login Diagnostics Diagnostics Help

	680	_
View Area 684 Home 685 Gas Readings 680 Device Information 690 Alarms 692 Event Log 694 Setup Area 696 Diagnostics 698 Network Statistics Help 700	This page is served  Active Alarms Detailed Information	his Communication Module

View Area Active Area Area Communications

Home Gas Readings Alarms Module

Device Information

Masters Alarms Data at 12-Jul-2001 15:40:08

Event Log Gas Type Value Alarm Silenced

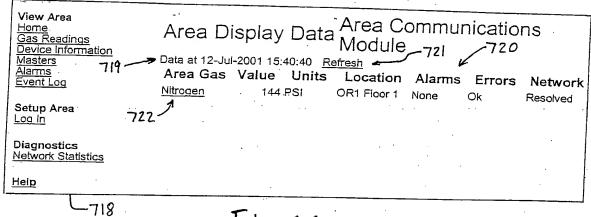
Setup Area Log In

Diagnostics

Network Statistics

Help

Fig. 43



724

View Area Home Gas Readings Device Information  Masters Alarms 724 Item Value  Gas Type Nitrogen  Setup Area Log In Value 144-PSI  Diagnostics Alarm None  Network Statistics Status Ok  Connection Resolved  Help Area OR  Zone 1  Fioor 1  Direction  730 Alarm High 190 PSI  731 Display Data Area Communications Module  Module  725  Alarm Value 725  Item Value  144-PSI  None  Ok  Connection Resolved  Area OR  Zone 1  Fioor 1  Direction  730 Alarm High 190 PSI  732 Alarm Low 140 PSI  734 Display SN 4100  736 Transducer SN 1016		. /	*
	Home Gas Readings Device Information Masters Alarms Event Log  Setup Area Log In  Diagnostics Network Statistics  Help  730 - 732 - 734 -	Data at 12-Jui-2  Item  Gas Type  Measurement  Value  Alarm  Status  Connection  Area  Zone  Fioor  Direction  Alarm High  Alarm Low	Nitrogen Pressure 144-PSI None Ok Resolved OR 1 190 PSI 1440 PSI
	126	- Iransducer SN	1016

10		
View Area Home Gas Readings Device Information	Device Info	Area Communications Module
Masters Alarms Event Log	Type: Serial Number:	Area Communications Module
Setup Area Log In	Model Number: Software Version:	HRCM-0000-0000 0:37
Diagnostics Network Statistics	Software Build: Current Time:	018 12-Jul-2001 15:41:20
<u>Help</u>	Date Code: Name:	Week 7, 2001 Comms11
	Area:	. OR
	Zone:	1 .
	Floor:	1
	Direction:	East
	IP Address:	192.168.1. <u>2</u> 00
	MAC Address:	00:03:aa:00:00:11

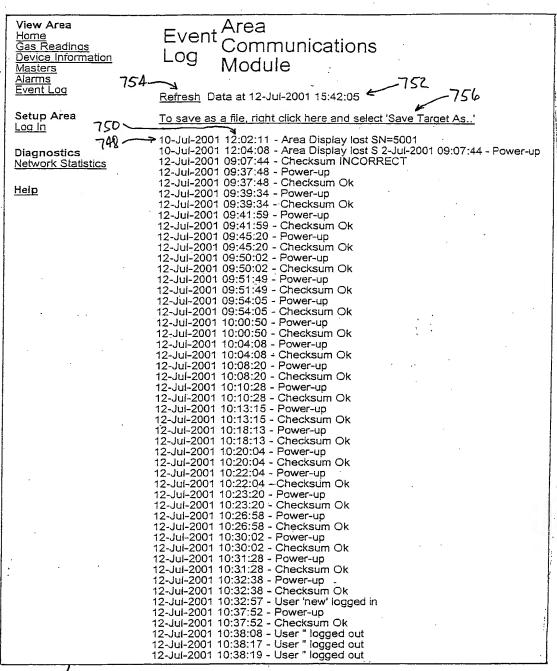
740~

View Area Home Gas Readings Device Information Masters Alarms Event Log  Setup Area Log In  Diagnostics Network Statistics  Masters  Masters  Masters  Master  Master  Area Communication Module 742  Refresh Data at 12-Jul-2001 15:41:38  Master Details  Location PBX  744  The properties of the propert	

Fig. 46

738-

Fig. 47



746

View Area Home Gas Readings Device Information	Login	Area Communications Module
Masters Alarms Event Log	These entries are case so	
Setup Area Log In	User Name new Password	
Diagnostics Network Statistics	500mm ← 764	
Help		
758	Fig. 49	
		-
	766	
View Area 4770 Home Gas Readings Device Information	Login Status	Area Communications Module
Masters Alarms Event Log	You are logged in as r	new — 768
Setup Area Setup Device Setup Network Set Clock Administrate Users Update Flash Log Out 782	14 16 778	
Diagnostics Network Statistics		
Help		-

Fig. 50

	186
View Area Home Gas Readings Dévice Information Masters	Device Settings Area Communications Module
Alarms Event Log	Device Name Comms11 788
Setup Area	Location Area OR 791
Setup Device Setup Network	Location Zone 1 ← 796
Set Clock Administrate Users Update Flash	Location Floor 1 792
Log Out	Location Direction East 795
Diagnostics Network Statistics	Submit Reset 794
Help	798 \$ 800 \$
	Fig 51

	· \	·
View Area Home Gas Readings Device Information Masters Alarms Event Log	Device Setup Results	Area Communications Module
273.11.233	Changes to d	levice setup where accepted
Setup Area Setup Device Setup Network Set Clock Administrate Users Update Flash Log Out  Diagnostics Network Statistics	812	
<u>Help</u>	•	·

Fig. 52

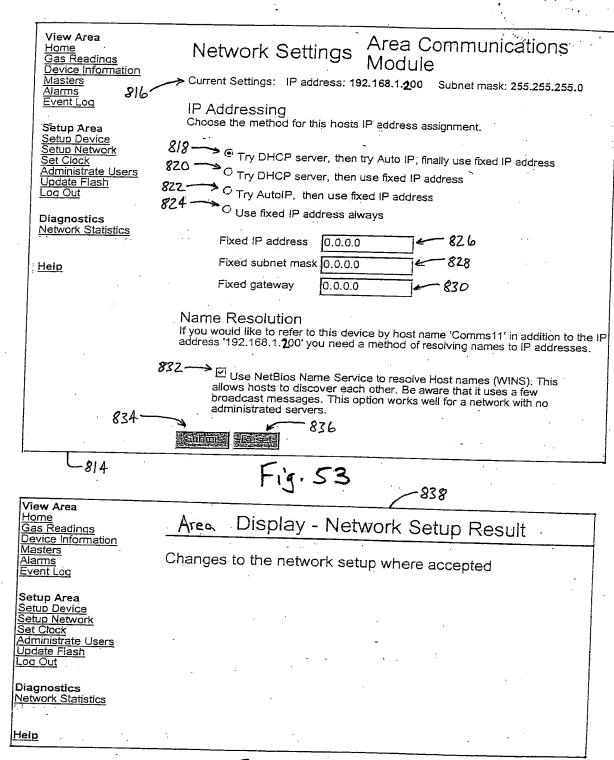
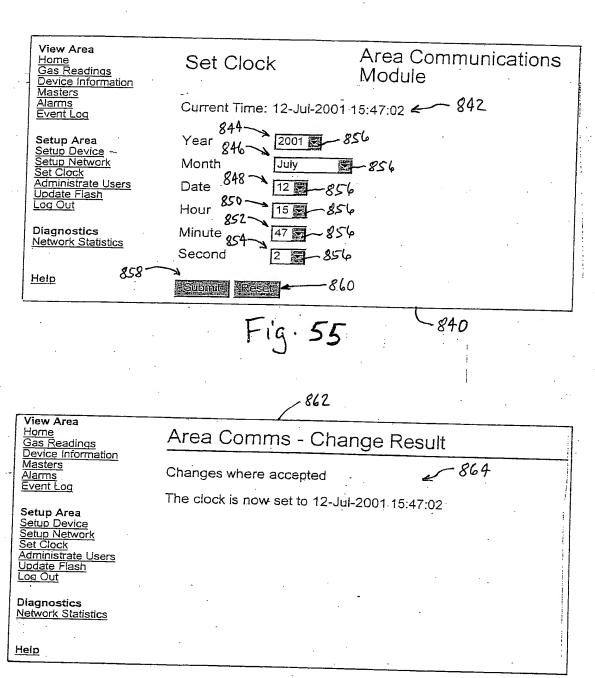


Fig. 54



a staglet.

Mark Spirit

Fig. 56

<u>Help</u>

View Area Home Gas Readings Device Information Masters Alarms Event Log  Setup Area Setup Device Setup Network Set Clock Administrate Users Update Flash Log Out	User Area Communications Administration Module  These entries are case sensitive  868 User Name Password 870  User 1 Name new User 2 Name User 3 Name User 3 Name
Diagnostics Network Statistics  Help	Reset 874 1
876-	Fig. 57
View Area Home Gas Readings Device Information Masters Alarms Event Log	Change User Info Area Communications Result Module  Changes to user name and password where accepted
Setup Area Setup Device Setup Network Set Clock Administrate Users Update Flash Log Out Diagnostics	
Network Statistics	:

Fig. 58

200 - 200 - 200 MM - 44.00

View Area Home Gas Readings Device Information <u>Masters</u> Alarms Event Log Setup Area Setup Device Setup Network Set Clock <u>Administrate Users</u> Update Flash Log Out

Flash Download

Area Communications Module

880

This device has updateable FLASH program memory. The memory can be updated with a new version of application software using a special program on your computer. Once the device enters the FLASH programming mode, new software must be downloaded from a PC.

The download process must be completed successfully before this device will work correctly again.

Click here to enter the FLASH programming mode

Help

Diagnostics Network Statistics

878

886

View Area Home Gas Readings Device Information Masters Alarms Event Log

Setup Area Setup Device Setup Network Set Clock Administrate Users Update Flash

Diagnostics Network Statistics Confirm Download

Area Communications Module

Verify your intention

Once FLASH programming mode is entered the device will not operate as an alarm system until the download is successfully complete.

Click here to confirm entering FLASH programming mode

Help

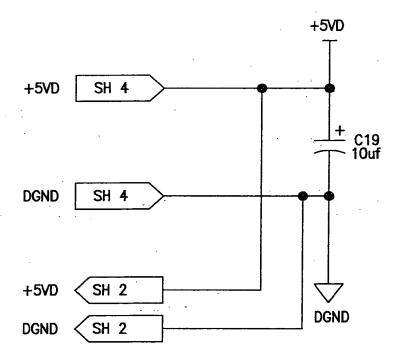
Log-Out

View Area	Communic	ations Area Communications
Home Gas Readings	Statistics	Module Module
Device Information Masters	Ethernet Refres	J 0 116
Alarms	IP Address	192.168. 1.200
Event Log	Subnet	255.255.255. 0
Setup Area	Gateway	192.168. 1. 1
Setup Device	Fixed IP Address	0. 0. 0. 0
Setup Network Set Clock	Fixed Subnet	0. 0. 0. 0
Administrate Users	Fixed Gateway	0. 0. 0. 0
Update Flash Log Out	Mac Address	00:03:aa:00:00:11
	Receives	662
Diagnostics	Unicasts	590
Network Statistics	Multicasts	0
	Broadcasts	72
<u>Help</u>	Rx Errors	0
	Rx Missed	0
	Rx CRC Errors	0
	Rx Drops	0
	Transmits	705
	Buffer Defers	0
	Tx Errors	0
	Tx Collisions	0
	Tx Coll. Overflow	0
	Tx FILO Errors	0
•	Traffic Backoffs	0
•		894
	Serial Communic	ations &
	Recieves	11591
	Transmits	11627
	Bad CRC	0
•	Missed End	0
	Packet Too Long	0 _

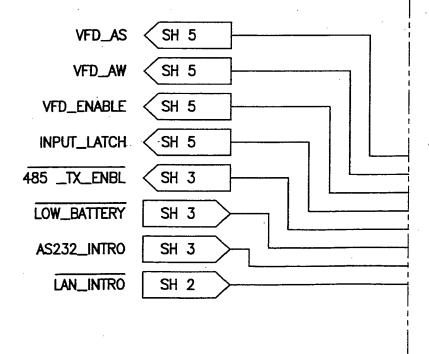
890-

FIG. 62A	FIG. 62D	FIG. 62G	FIG. 62J	FIG. 62M	FIG. 62P	FIG. 62S
FIG. 62B	FIG. 62E	FIG. 62H	FIG. 62K	FIG. 62N	FIG. 62Q	FIG. 62T
FIG. 62C	FIG. 62F	FIG. 621	FIG. 62L	FIG. 620	FIG. 62R	FIG. 62U

FIG. 62A



### FIG. 62B



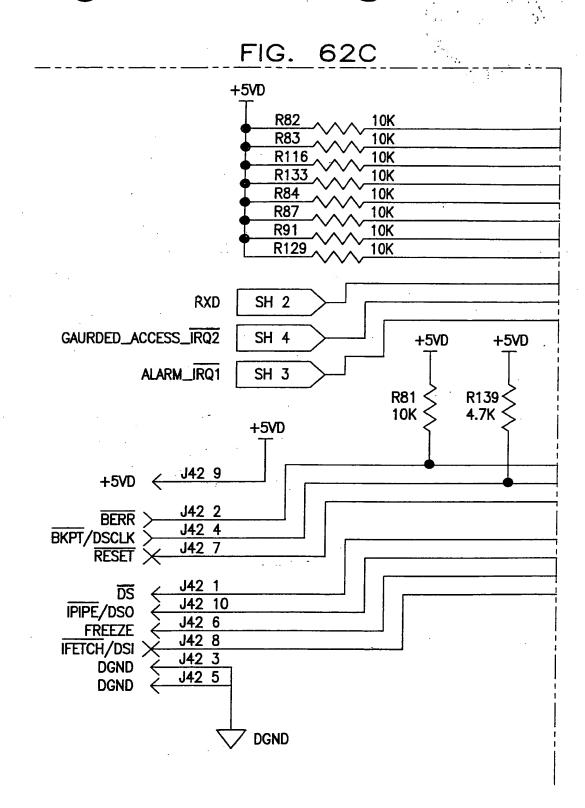
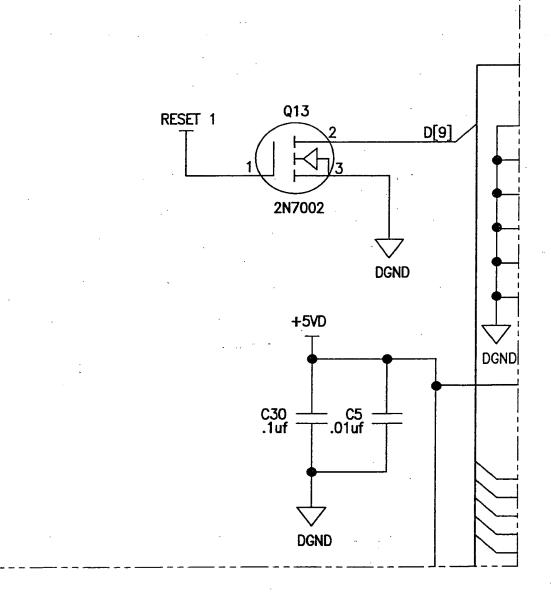
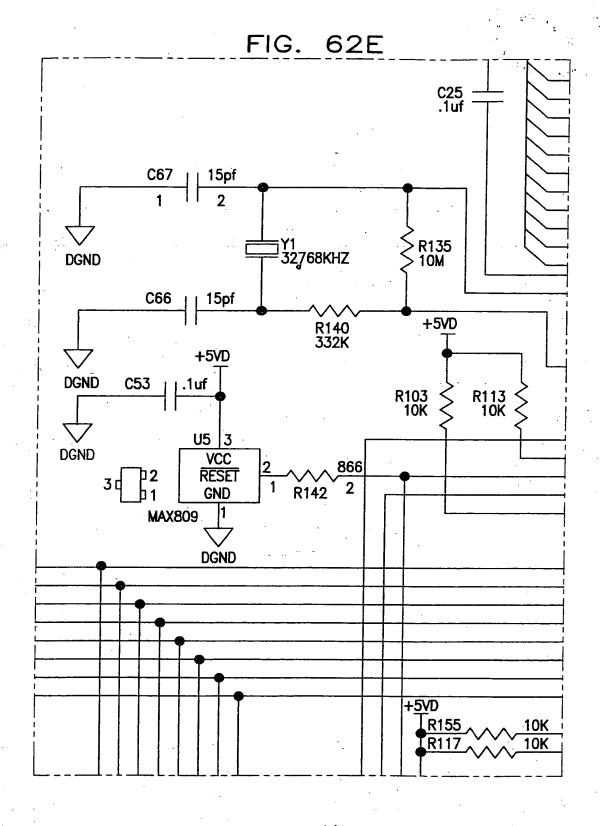


FIG. 62D



598.802657**8**57

All was been



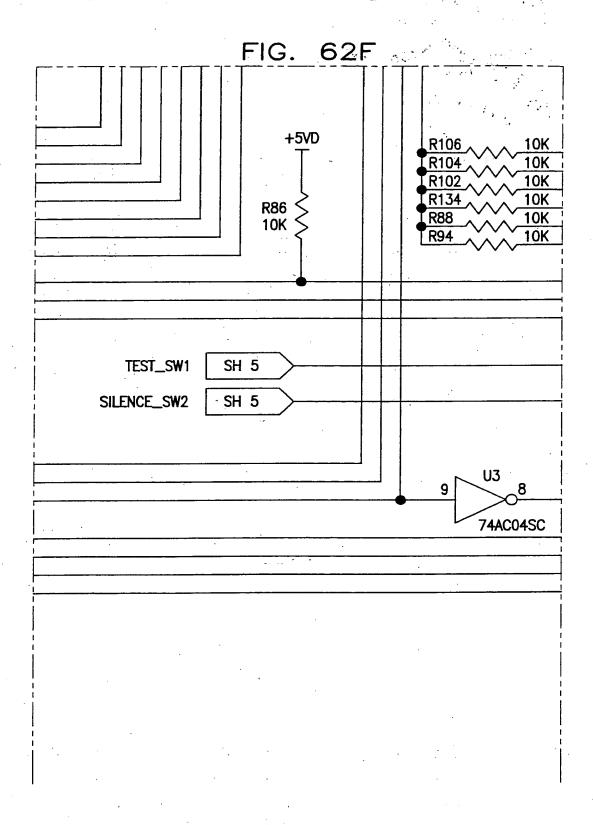
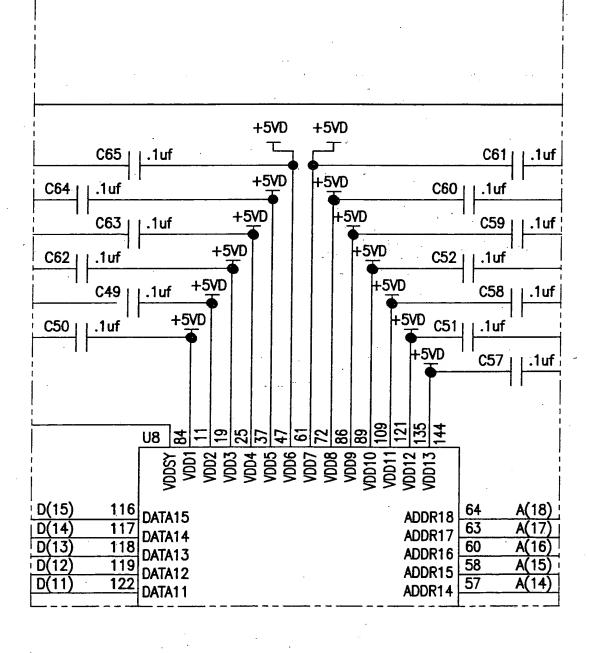


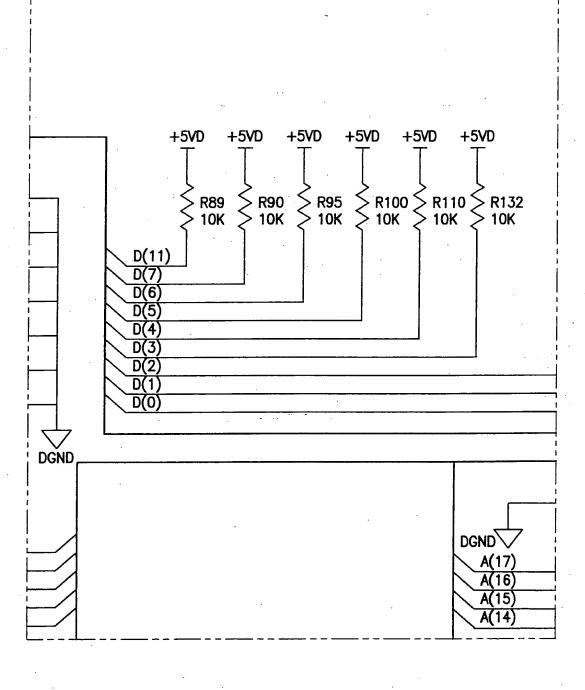
FIG. 62G

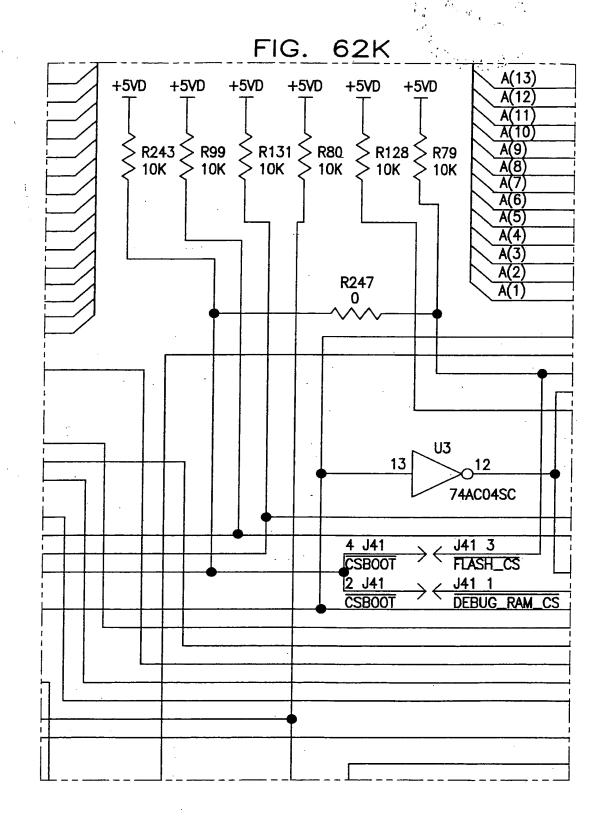


## FIG. 62H

	<del></del>		<u></u>	
D(10) 124	D.T. 40	ADDR13	56	A(13)
D(9) 125	DATA10	ADDR11	52	A(12)
D(8) 127	DATA9		51	A(11)
D(7) 130	DATA8	ADDR12	50	A(10)
D(6) 131		ADDR10	49	A(9)
D/E) 470	1DAIA6	- ADDR9	46	A(8)
D(4) 132	DATA5	ADDR8	45	
D(4) 133	DATA4	ADDR7		A(7)
D(3) 136	DATA3	ADDR6	44	A(6)
D(2) 137	DATA2	ADDR5	43	A(5)
D(1) 138	DATA1	ADDR4	42	A(4)
D(0) 139	DATAO	ADDR3	41	A(3)
	NC1	ADDR2	40	A(2)
16	NC2	ADDR1	39	A(1)
17	NC3	ADDRO	115	A(0)
87	XFC	NC14	88 _	A(19)
85	EXTAL	ADDR23/CS10	10	ı I
03	XTAL	ADDR22/CS9/PC6	9	
18	NC4	ADDR21/CS8/PC5	8	, !
<u>21</u> 27	NC5	ADDR21/030/P03	7	[
27		ADDR20/CS7/PC4	6	
94	NC6	ADDR19/CS6/PC3	5	·
93	BERR	CS5/FC2/PC2	4	F :
92	HALT	CS4/FC1/PC1	3	
79	RESET	CS3/FC0/PC0	108	
80	BKPT/DSCLK	NC15	143	
34	TSC	BGACK/CS2	142	
36	NC7	BG/CS1	141	<del>                                     </del>
34 36 23	NC8	BH/CSO	140	<u> </u>
24	IC4/OC5/OC1/PGP7	CSB00T	123	
28	0C4/0C1/PGP6	NC16		
29	OC3/OC1/PGP5	R/₩	103	<del></del>
23	OC2/OC1/PGP4	CLKOUT	<u>9</u> 0	
30	OC1/PGP3	PWMA	<u>1</u> 5	i
31	IC3/PGP2	PWMB	14	
32	IC2/PGP1	FREEZE/00UT	81	<u> </u>
32 33 38 53 22 13	IC1/PGP0	IPIPE/QSO	77	<u> </u>
38	NC9	IFETCH/DSI	78 126 104 105	
53	NC10	NC17	<u>1</u> 26	
22	PAI	SIZ1/PE7	104	li
13	PCLK	SIZ1/PE7 SIZ0/PE6	105	
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FIG. 62J





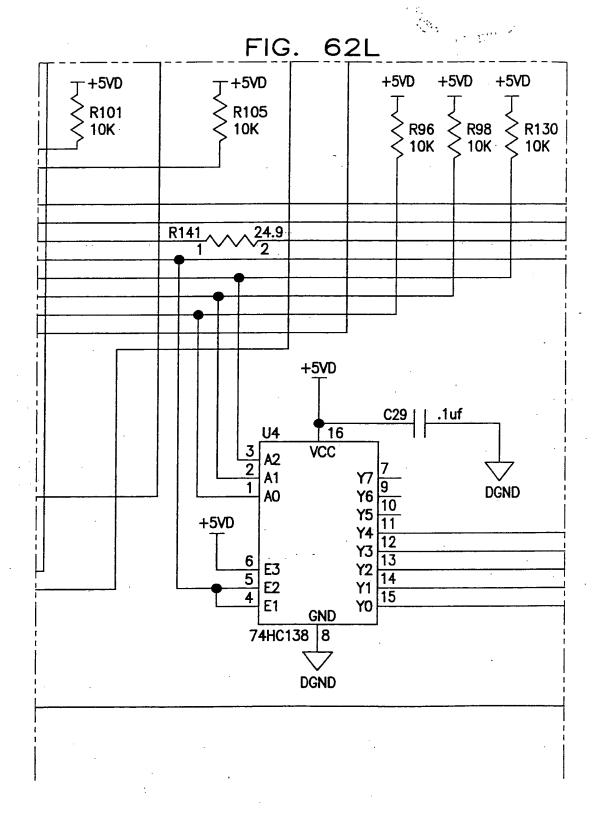
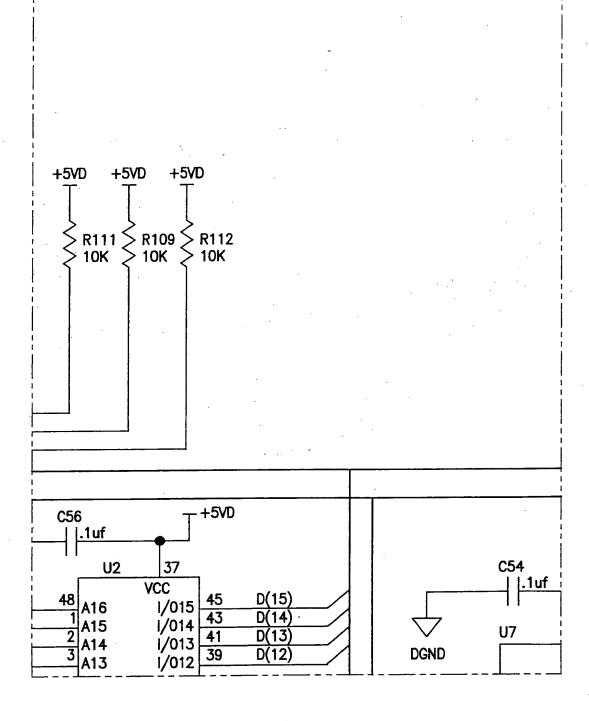


FIG. 62M



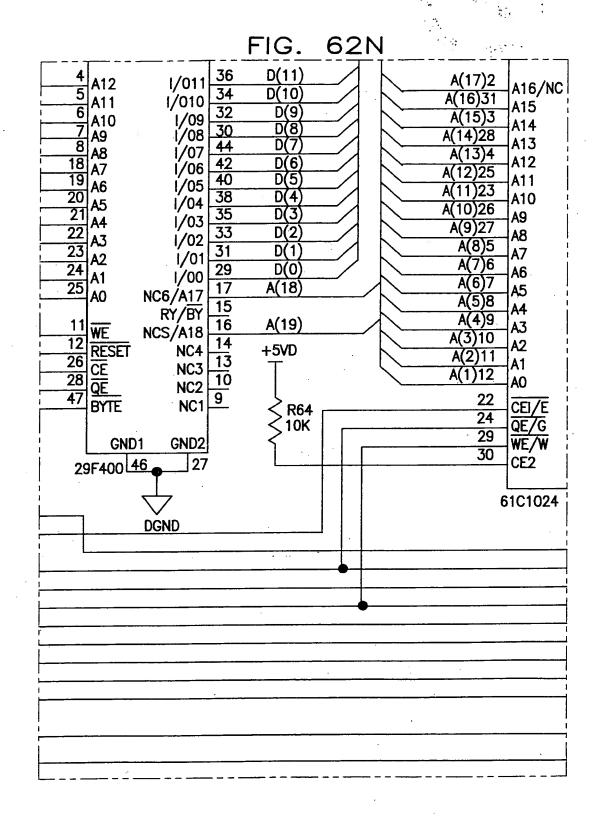
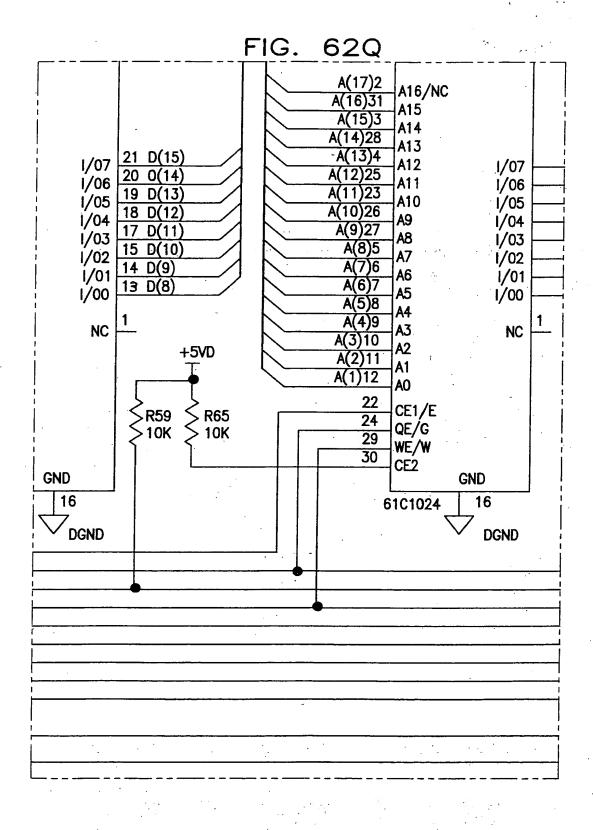


FIG. 620 +5VD +5VD +5VD +5VD ≷ R92 10K ≷ R93 10K R97 10K R85 10K U3 74AC04SC LOCAL\_ALARM\_CS SH 5 LED\_DISPLAY\_CS SH 5 SEEPROM1\_CS SH 2 U3 SH 2 RTC SELECT 74AC04SC RESET SH 2

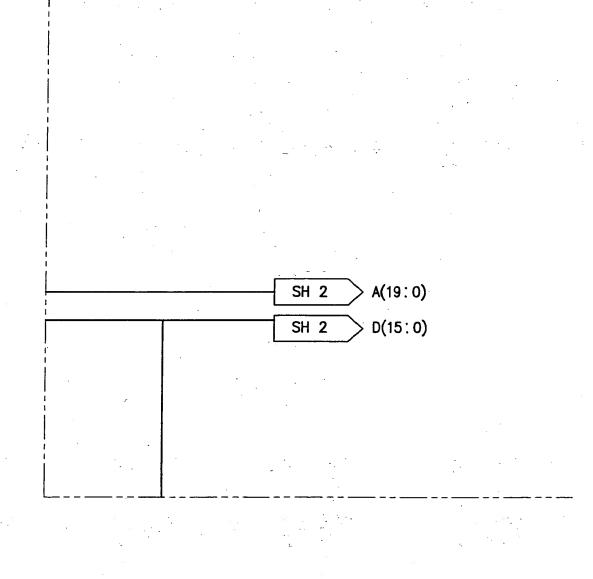
FIG. 62P +5VD +<u>5</u>VD C55 | |.1uf U6 32 32 DGND VCC VCC

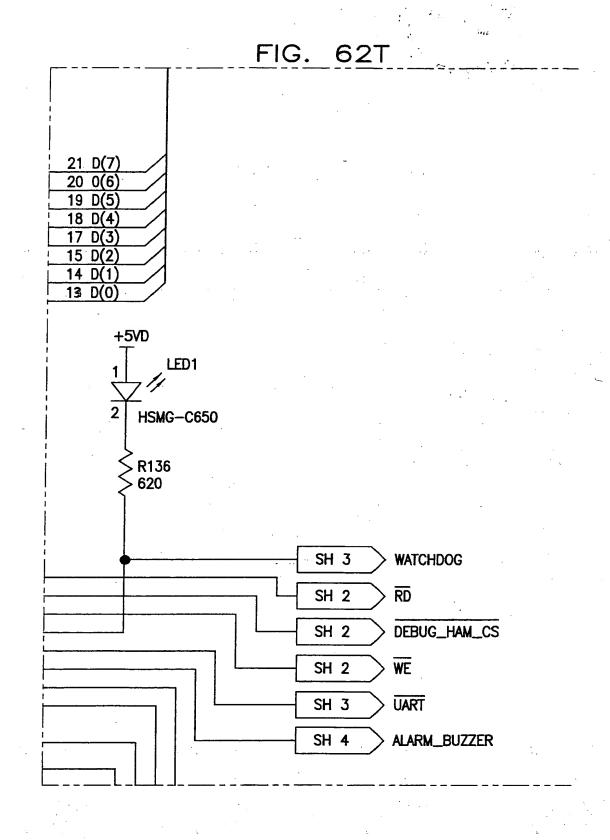


20 TV.

arana <mark>iU</mark>

FIG. 62S





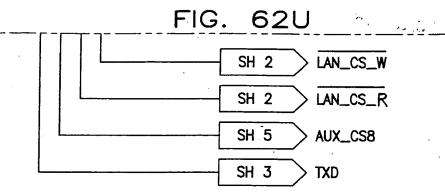


FIG. 63A	FIG. 63D	FIG. 63G	FIG. 63J
FIG. 63B	FIG. 63E	FIG. 63H	FIG. 63K
FIG. 63C	FIG. 63F	FIG. 631	FIG. 63L

FIG. 63A

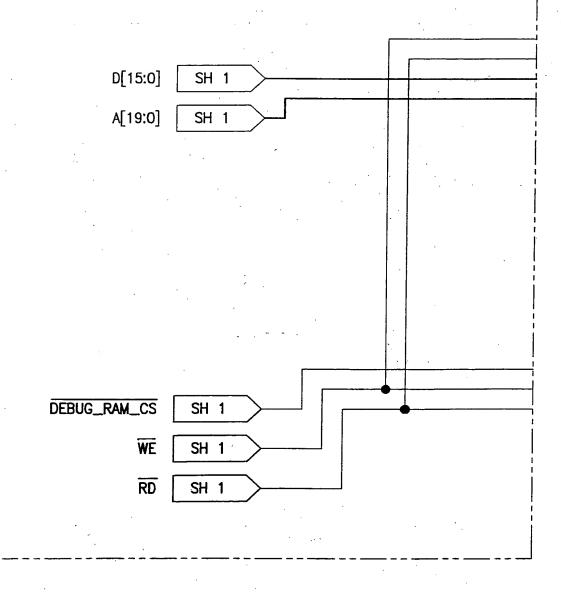
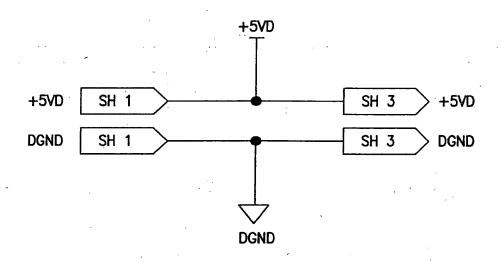
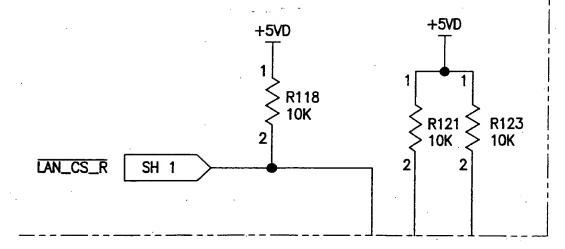
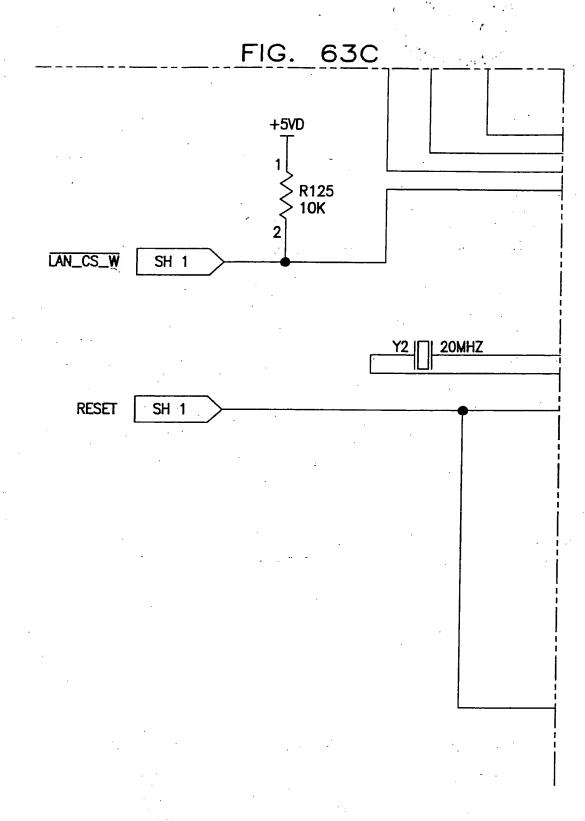


FIG. 63B

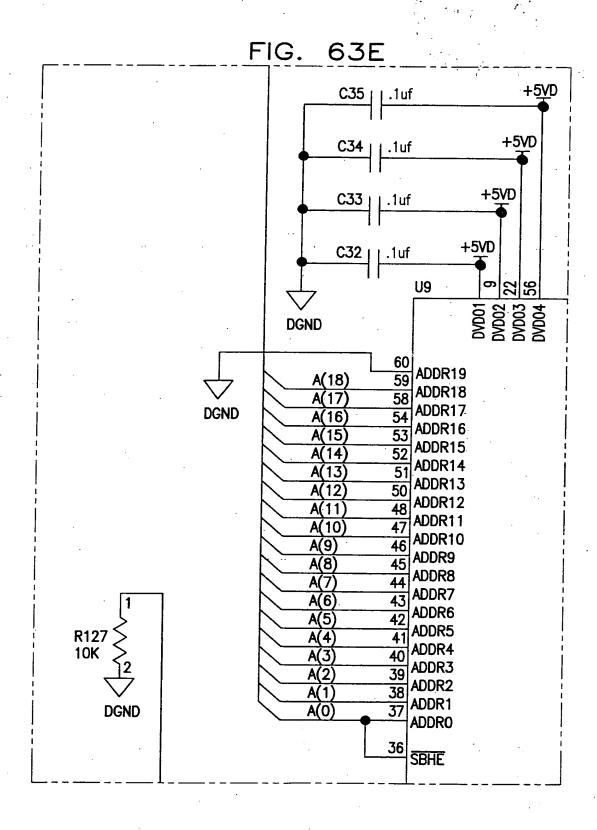






#### FIG. 63D

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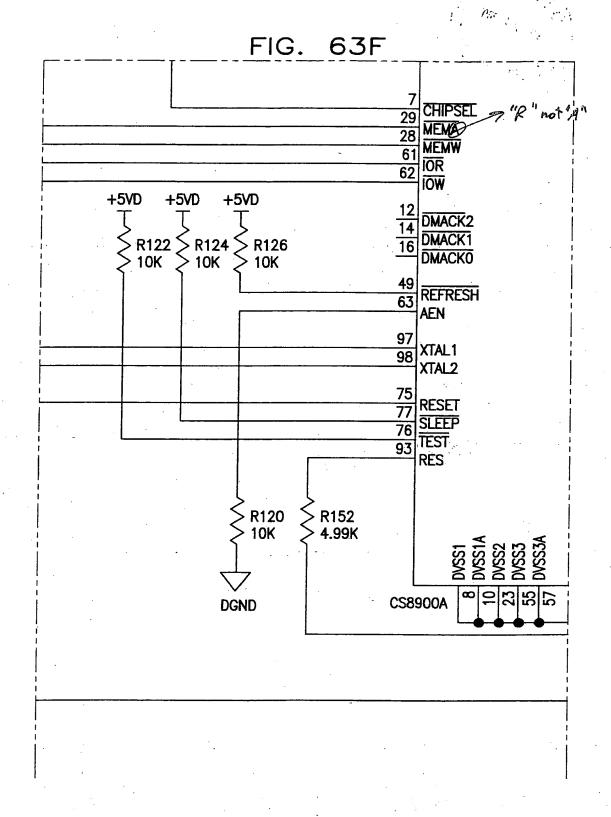
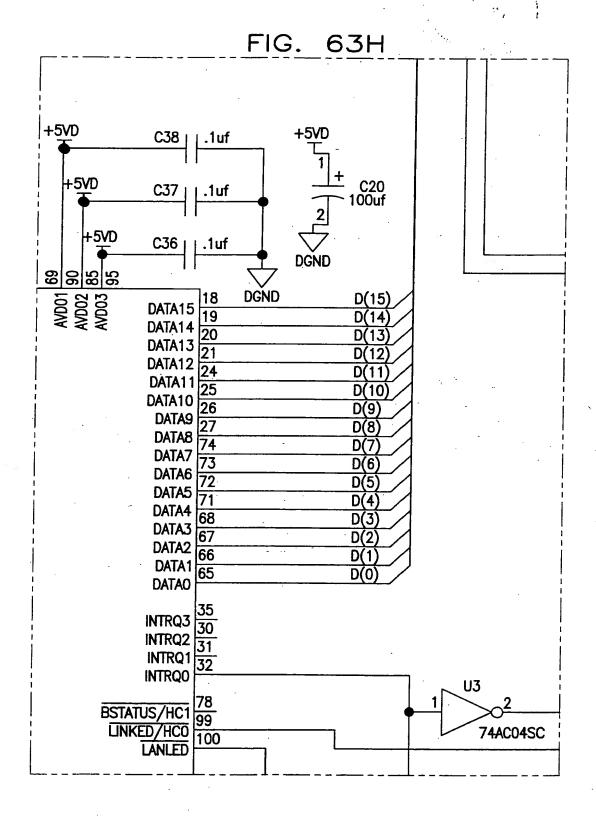
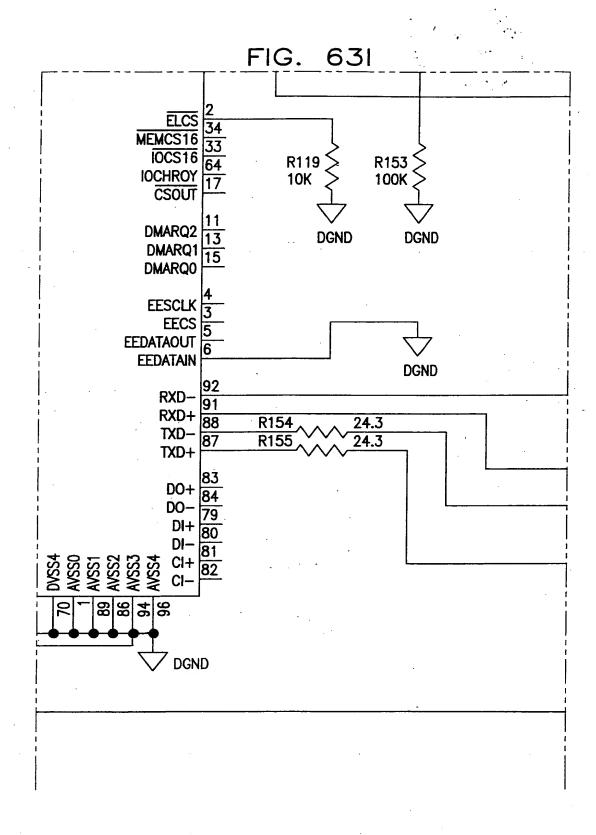
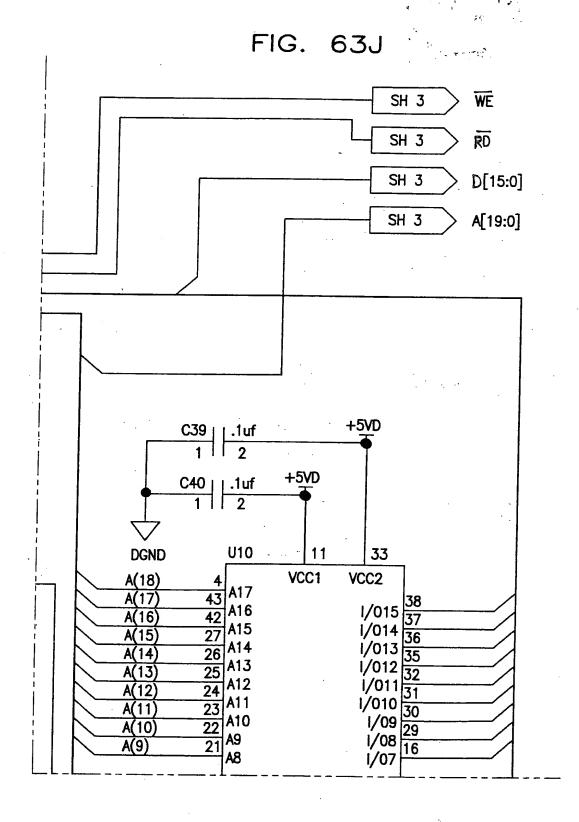


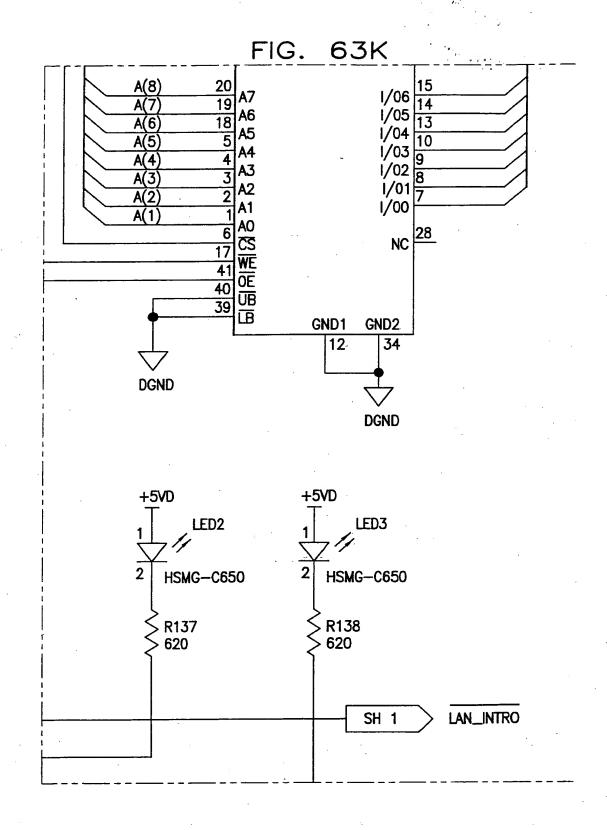
FIG. 63G

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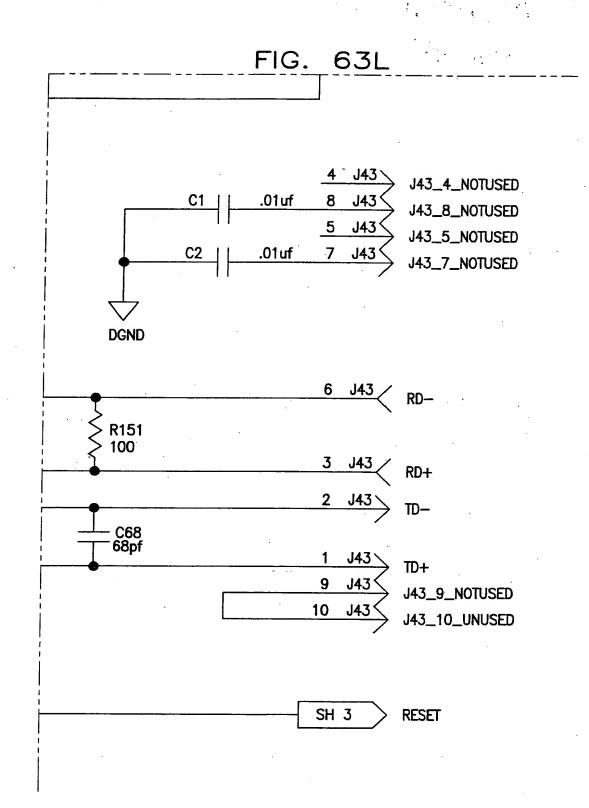
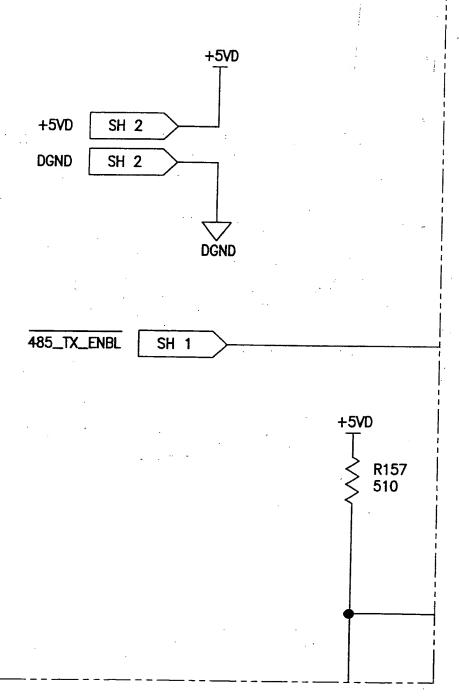
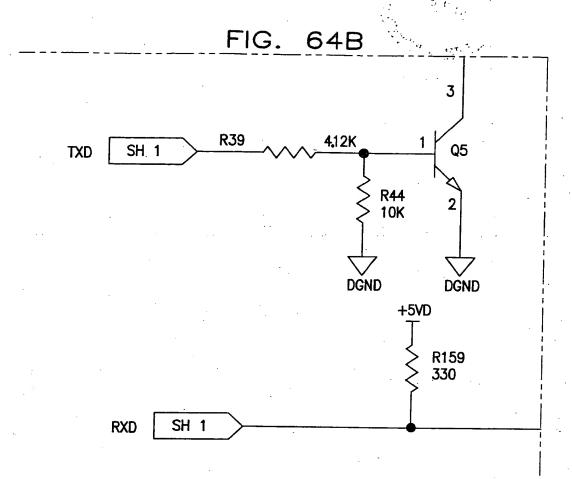


FIG. 64A	FIG. 64D	FIG. 64G	FIG. 64J	FIG. 64M	FIG. 64P
FIG. 64B	FIG. 64E	FIG. 64H	FIG. 64K	FIG. 64N	FIG. 64Q
FIG. 64C	FIG. 64F	FIG. 641	FIG. 64L	FIG. 640	

FIG. 64A





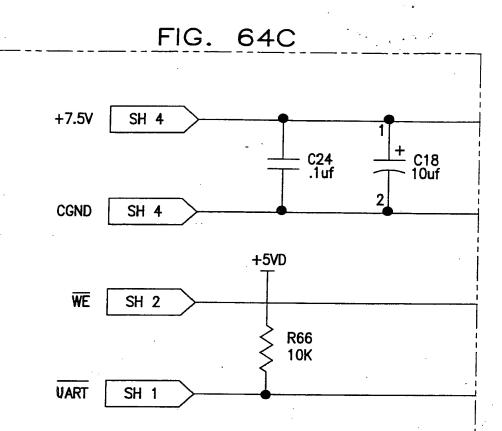
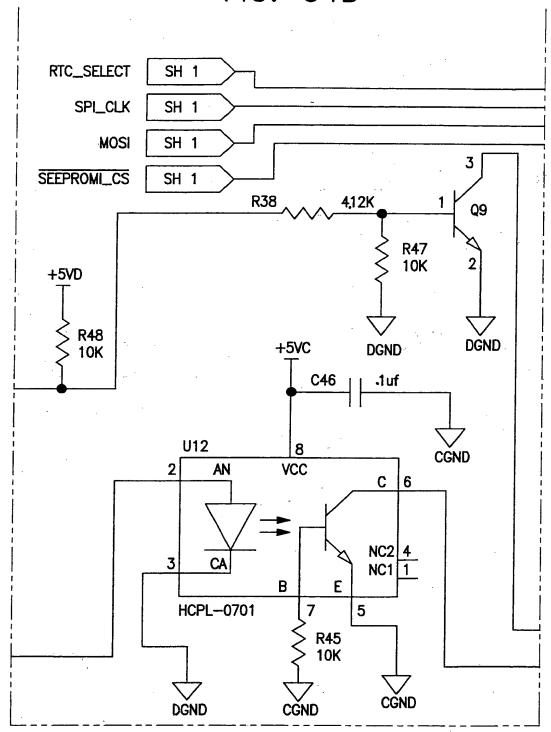
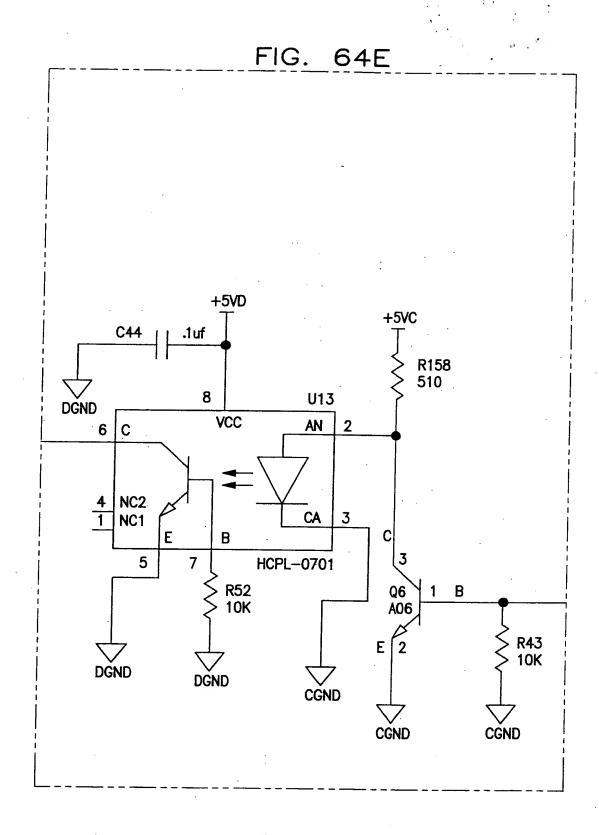


FIG. 64D





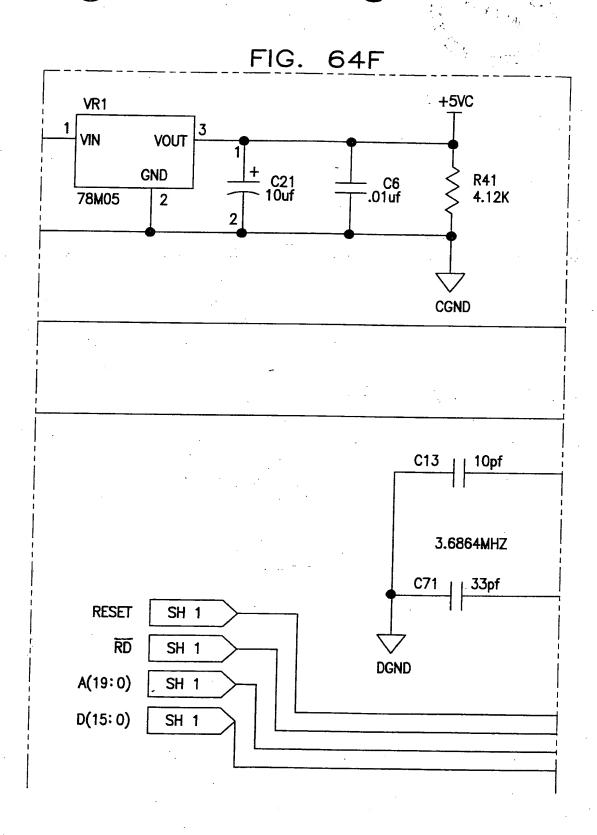
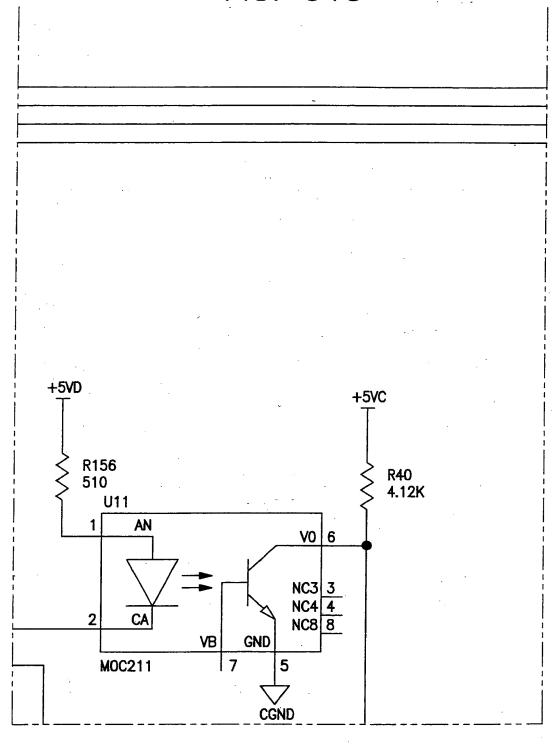
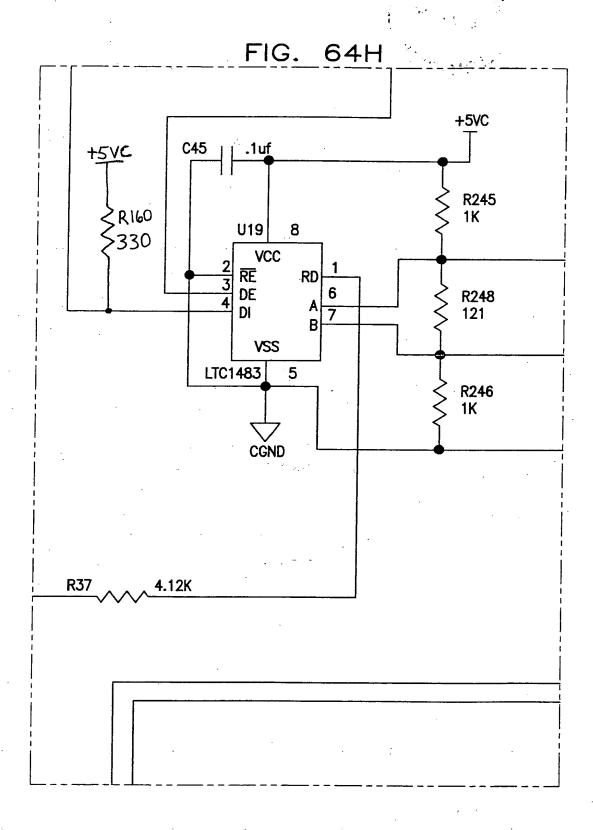


FIG. 64G





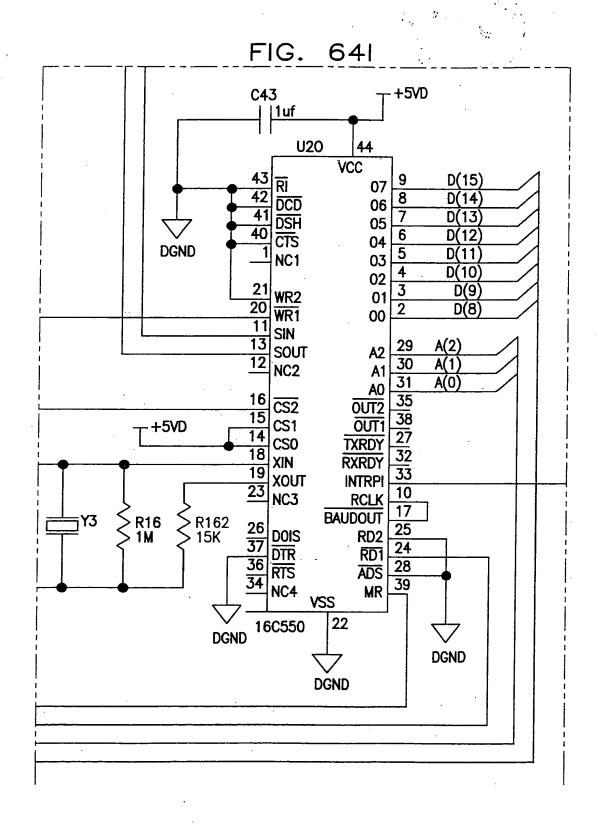
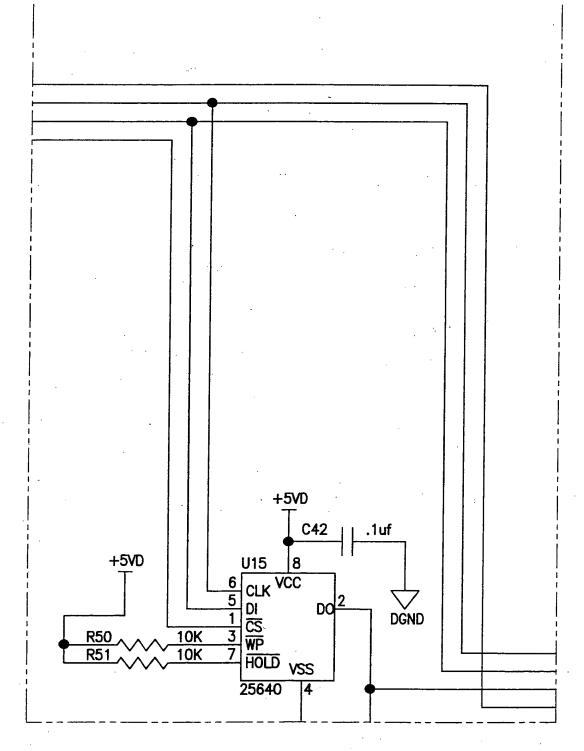
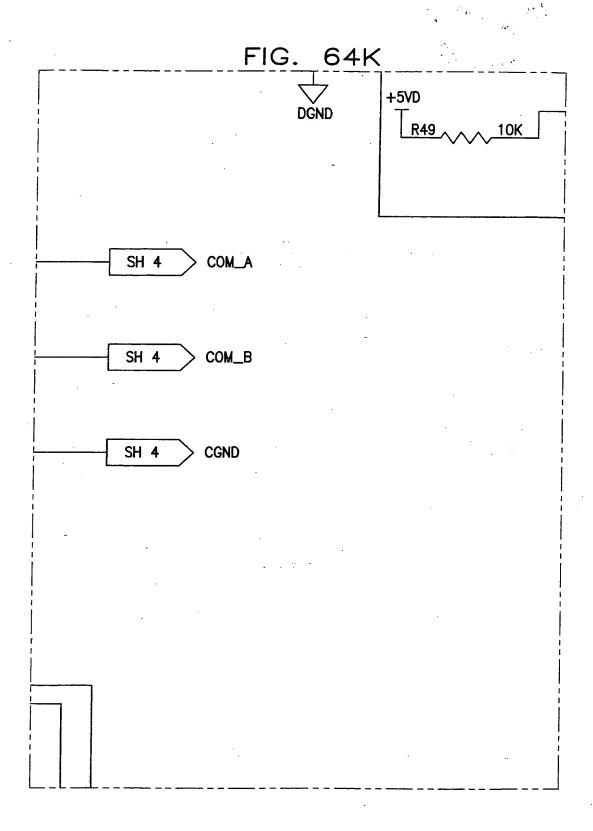
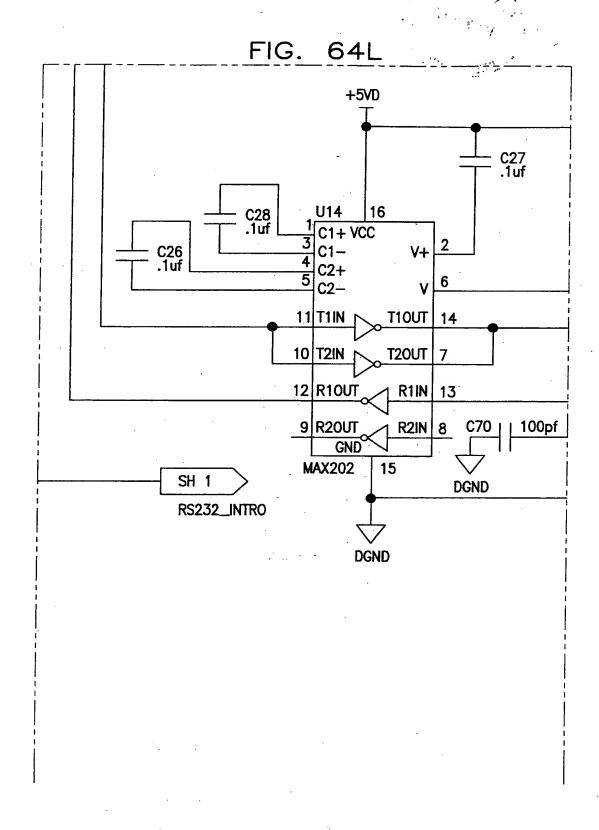
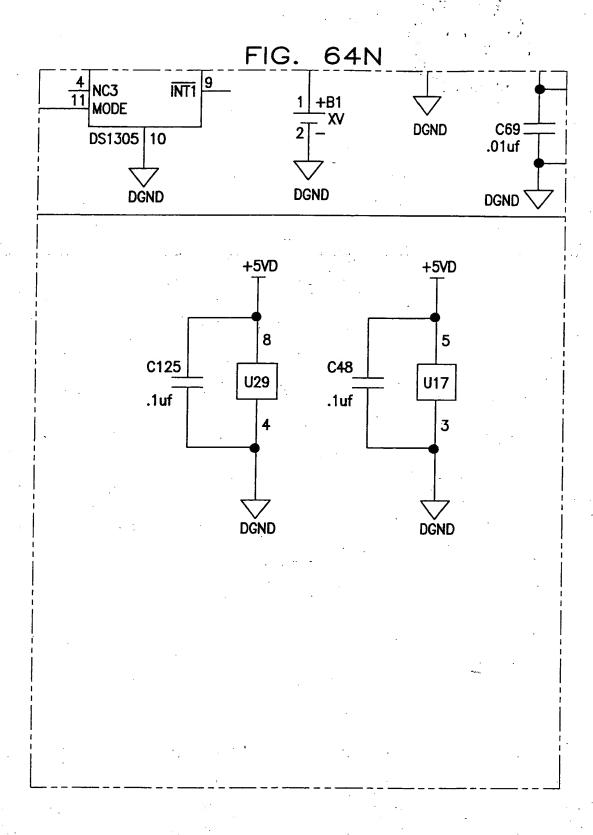


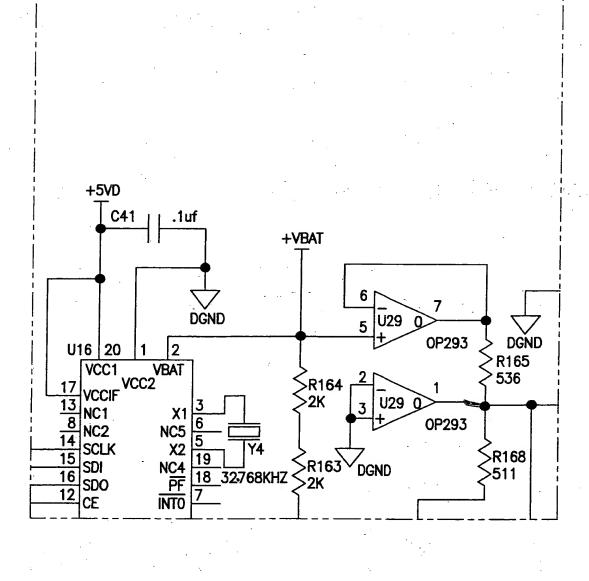
FIG. 64J











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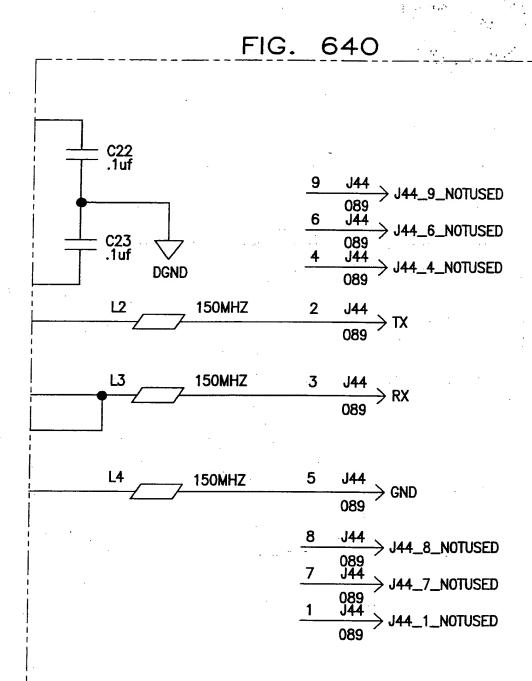
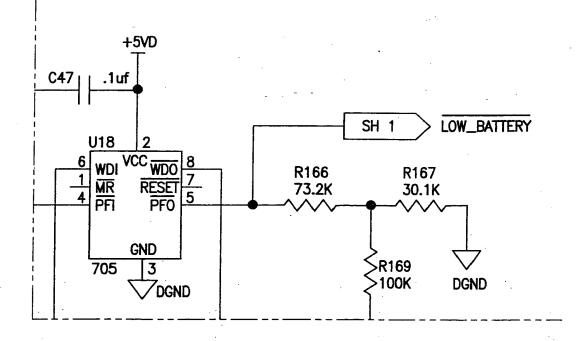
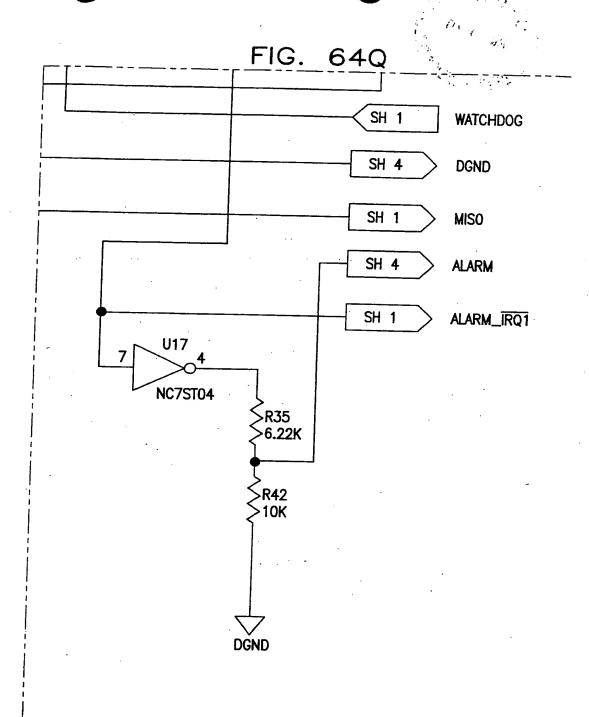


FIG. 64P



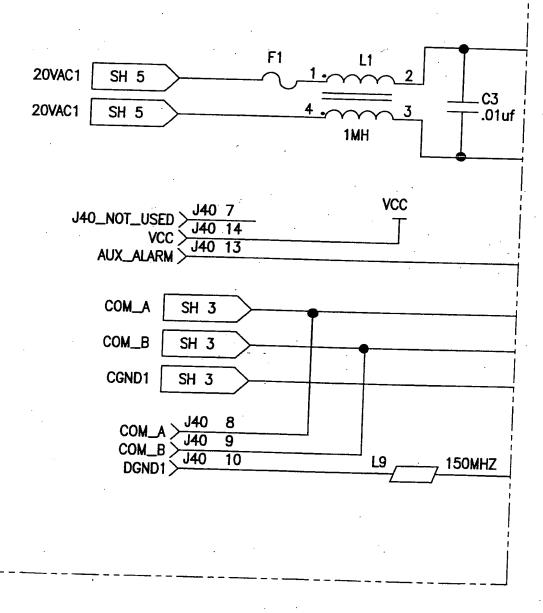


## FIG. 65

		<del>`</del>			
	FIG. 65C	FIG. 65F	FIG. 65H	FIG. 65J	FIG. 65L
FIG. 65A	FIG. 65D	FIG. 65G	FIG. 651	FIG. 65K	, , , , , , , , , , , , , , , , , , ,
FIG. 65B	FIG. 65E				

## FIG. 65A





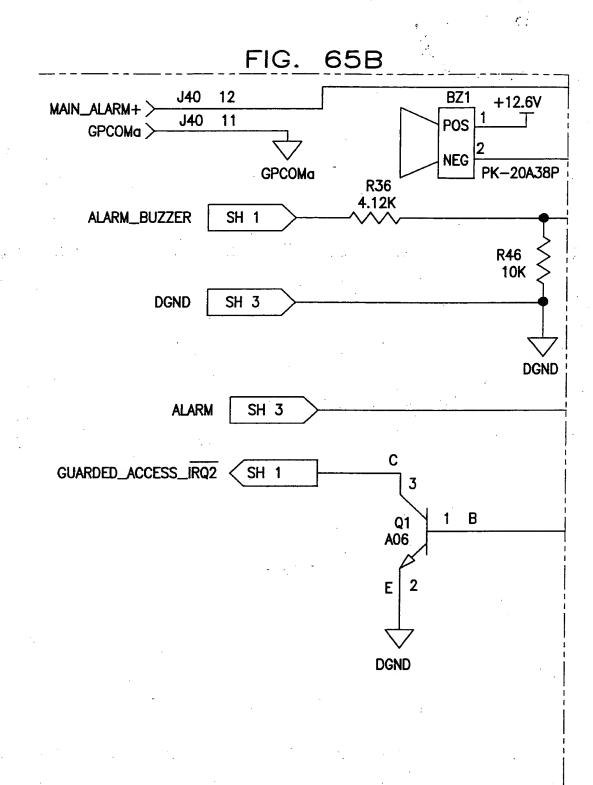
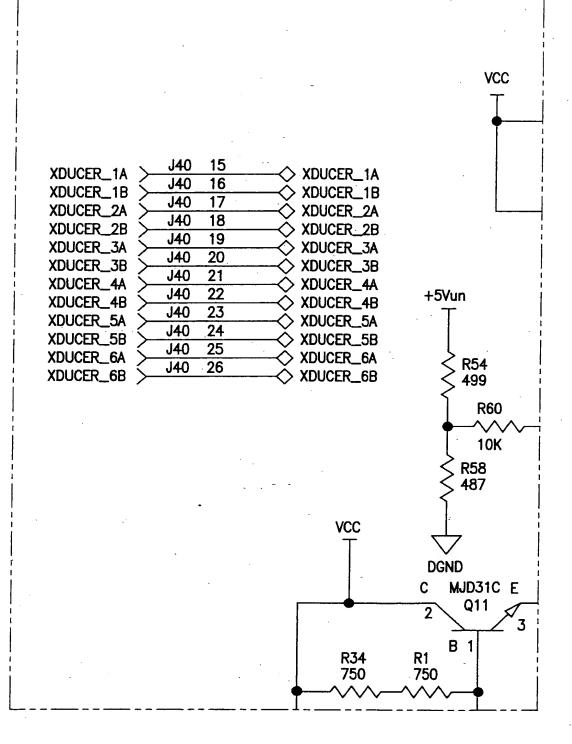
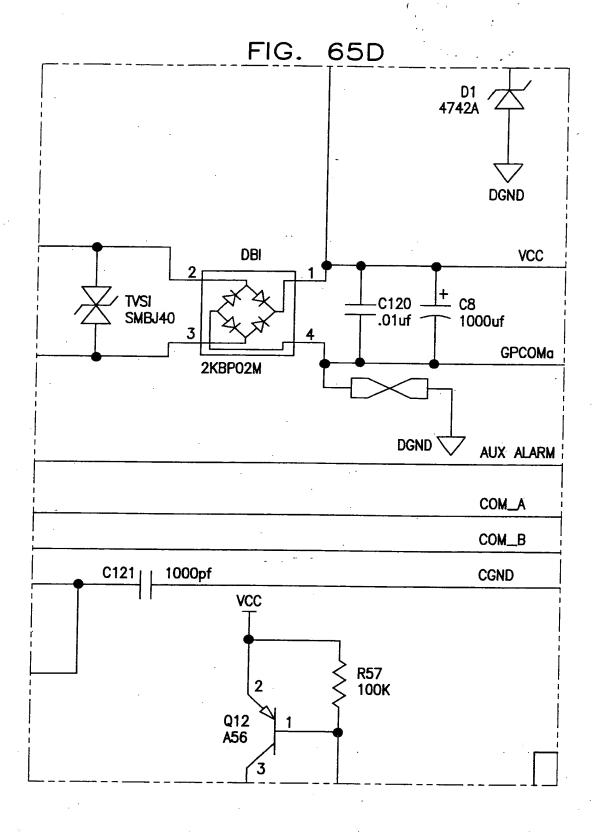


FIG. 65C





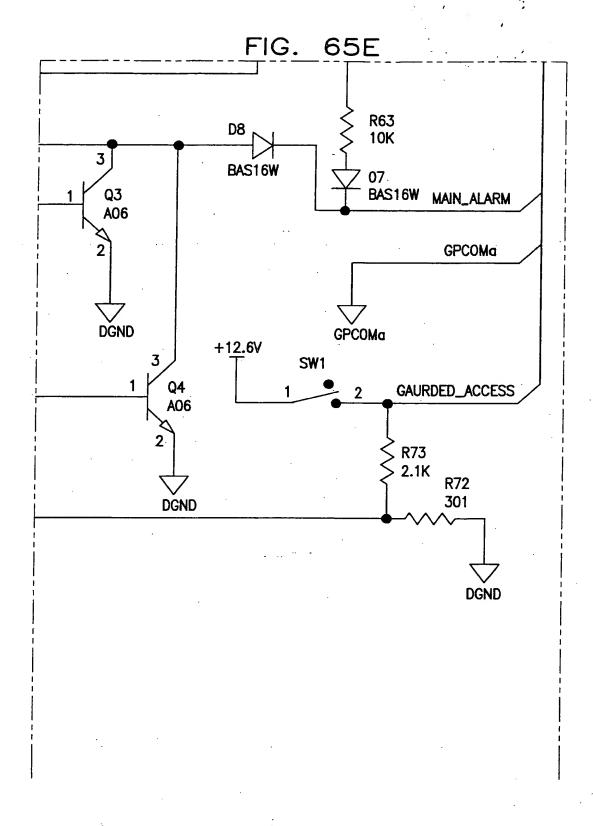
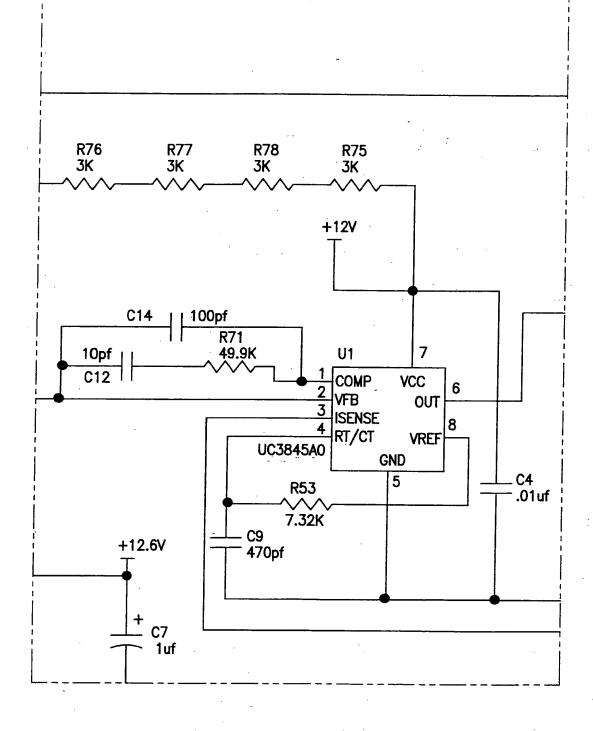


FIG. 65F



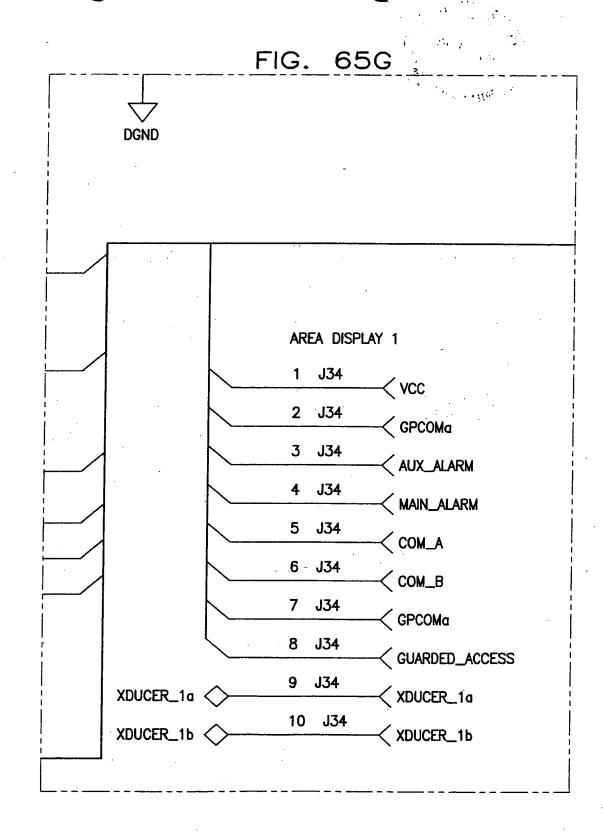


FIG. 65H ZENER D4 **T3** 0 D5 MURS160 6 **T4** R68 4.99 T1 O O T5 3 Q10 2 10 8 3 T6 N-FEÌ T2 **T7** R55 4.99 0 T1 XF 7 C10 1000pf R56 R74 0.5 **T8** 100K DGND

## FIG. 651

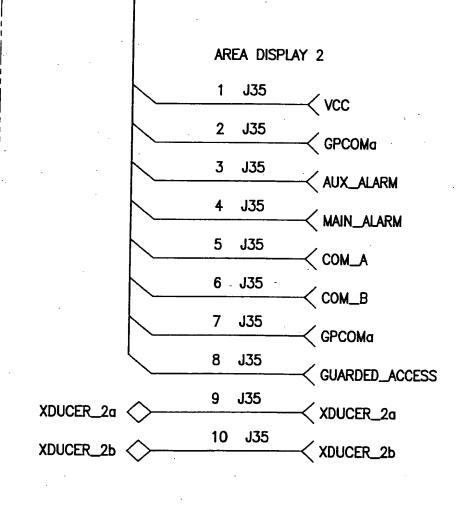
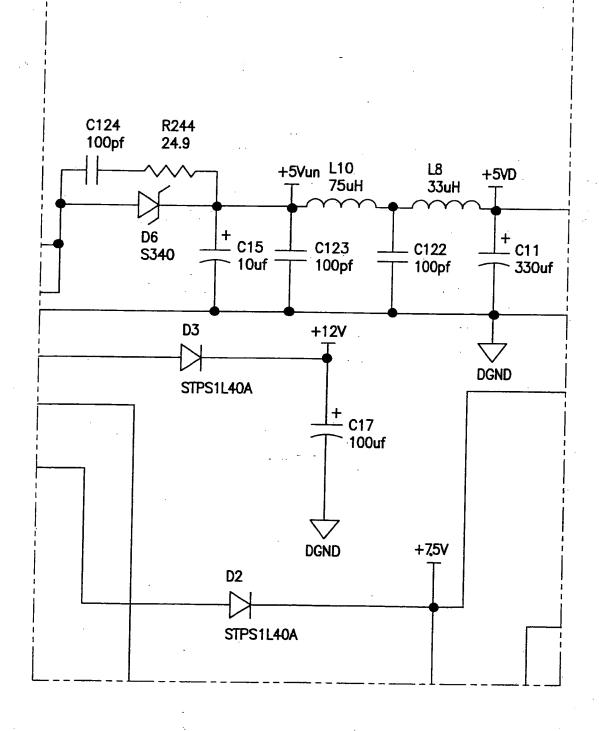


FIG. 65J



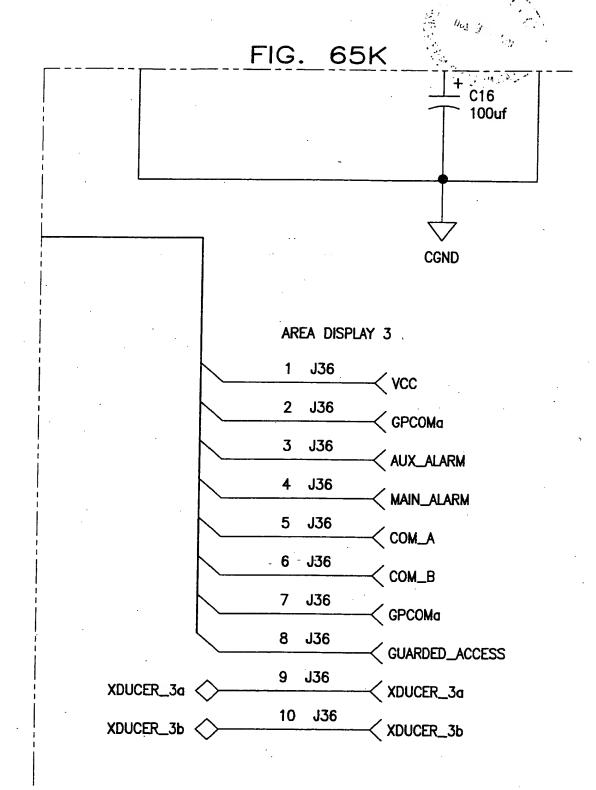
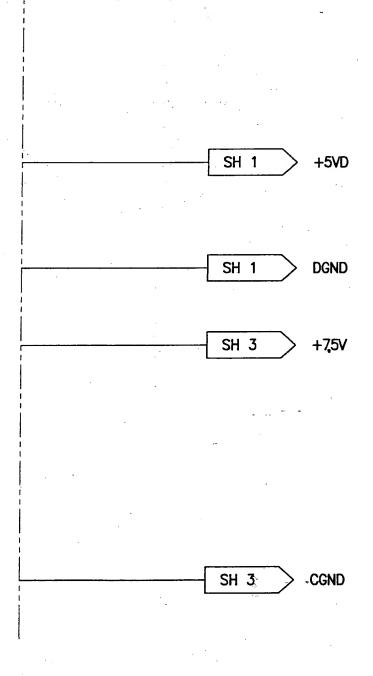


FIG. 65L



## FIG. 66

			-		
	FIG. 66E	FIG. 66J	FIG. 660	FIG. 66S	FIG. 66W
FIG. 66A	FIG. 66F	FIG. 66K	FIG. 66P	FIG. 66T	FIG. 66X
FIG. 66B	FIG. 66G	FIG. 66L	FIG. 66Q	FIG. 66U	
FIG. 66C	FIG. 66H	FIG. 66M	FIG. 66R	FIG. 66V	
FIG. 66D	FIG. 66I	FIG. 66N	-		*

LOCAL ALARM 11 > J32 9 LOCAL ALARM 12 > J32 10 LOCAL ALARM 13 > J32 11 LOCAL ALARM 14 > J32 12

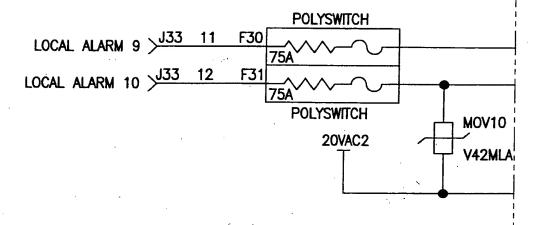
LOCAL ALARM 15 | J32 | 13 | LOCAL ALARM 16 | J32 | 15 | LOCAL ALARM 18 | J32 | 16 | LOCAL ALARM 18 | LOCAL ALARM 18 | J32 | 16 | LOCAL ALARM 18 | LOCAL ALARM 1

LOCAL ALARM 28 > J32 21 LOCAL ALARM 27 > J32 22 LOCAL ALARM 26 > J32 23 LOCAL ALARM 26 > J32 24

> LOCAL ALARM 24 > J32 25 LOCAL ALARM 23 > J32 26 LOCAL ALARM 22 > J33 1 LOCAL ALARM 21 > J33 2

LOCAL ALARM 1 >	<u>J33</u>	- 3	
LOCAL ALARM 1 > LOCAL ALARM 2 > LOCAL ALARM 3 > LOCAL ALARM 4 >	J33	4	
LOCAL ALARM 3	J33	5	
LOCAL ALARM 4	J33	6	
LOOME MEMININ T	-		

LOCAL ALARM 5 > LOCAL ALARM 6 > LOCAL ALARM 7 > LOCAL ALARM 8 >	J33 7
INCAL ALARM 5	J33 8
LOCAL ALAINM 0	J33 9
LOCAL ALAKM /	J33 10
LOCAL ALAKA O	



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FIG. 66E

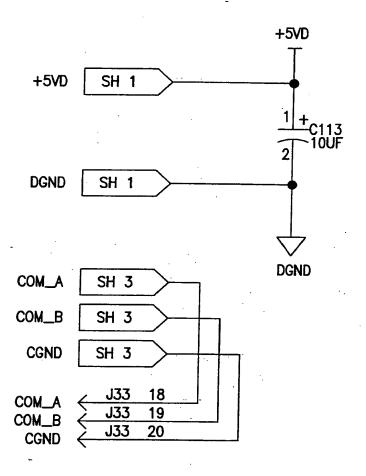
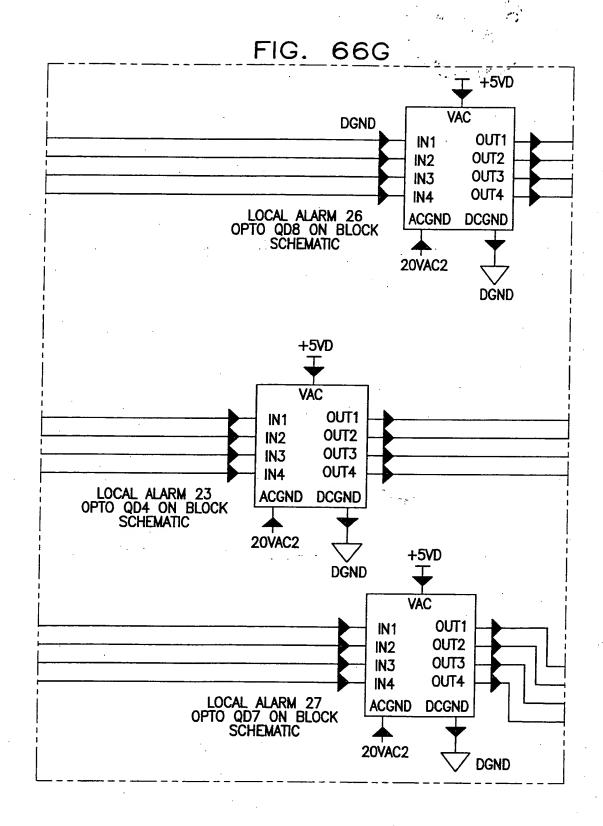
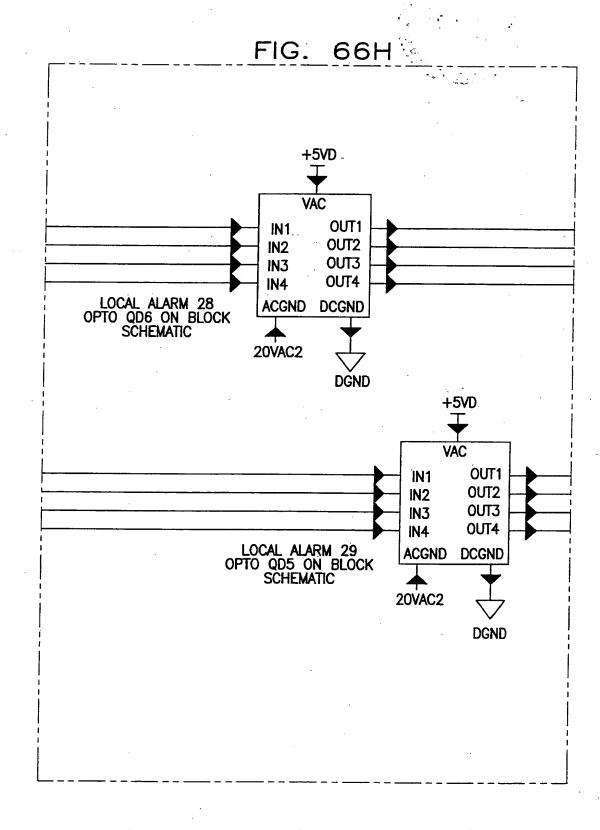


FIG. 66F **J32** 20VAC1 20VAC1 **J32** 2 20VAC1 **J32** 3 20VAC1 **J32** 4 SH 4 20VAC1 20VAC1 5 **J32** 20VAC2 **20VAC2** SH 4 6 **J32** 20VAC2 **J32** 20VAC2 8 **J32** 20VAC2 +5VD **20VAC2** OUT1 IN1 OUT2 IN2 **0**UT3 **IN3** OUT4 IN4 LOCAL ALARM 24 OPTO QD3 ON BLOCK SCHEMATIC **ACGND DCGND** 20VAC2 **DGND** +5VD VAC IN1 OUT1 OUT2 IN<sub>2</sub> OUT3 IN<sub>3</sub> **OUT4** IN4 LOCAL ALARM 25 OPTO QD2 ON BLOCK SCHEMATIC **DCGND ACGND 20VAC2 DGND** 





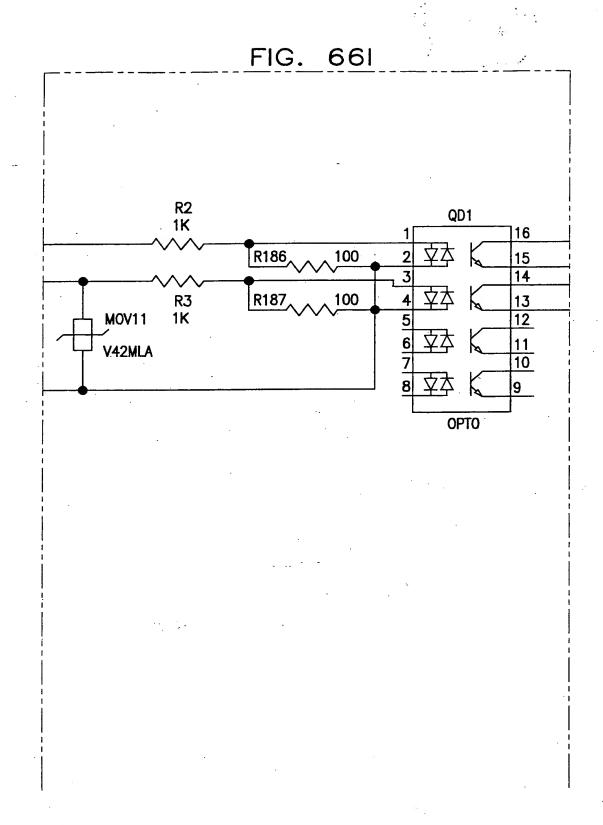
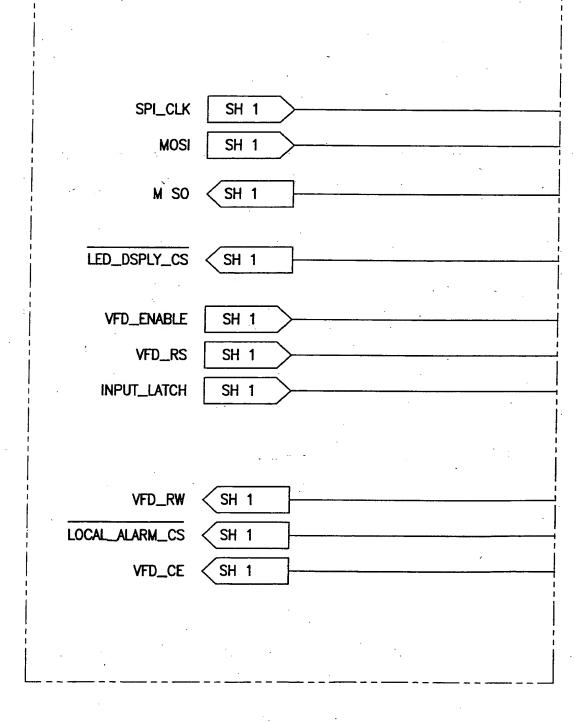
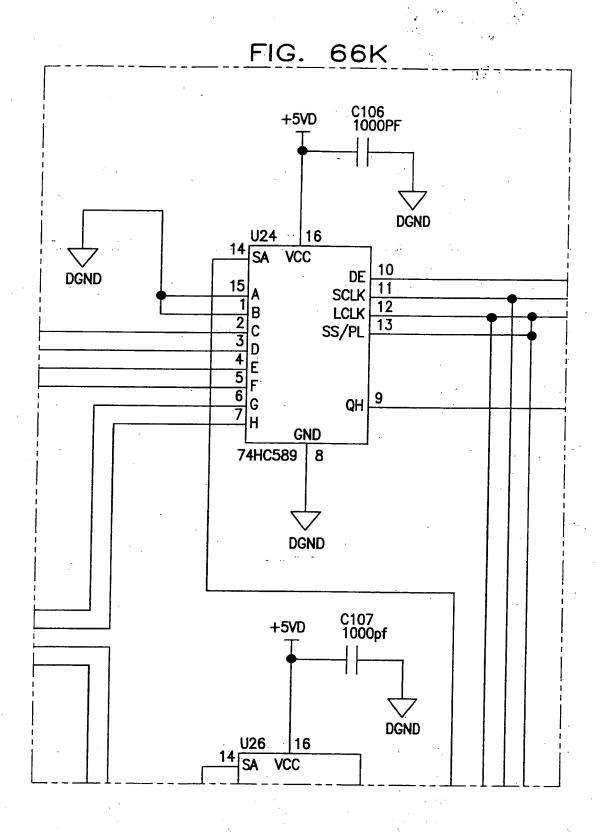
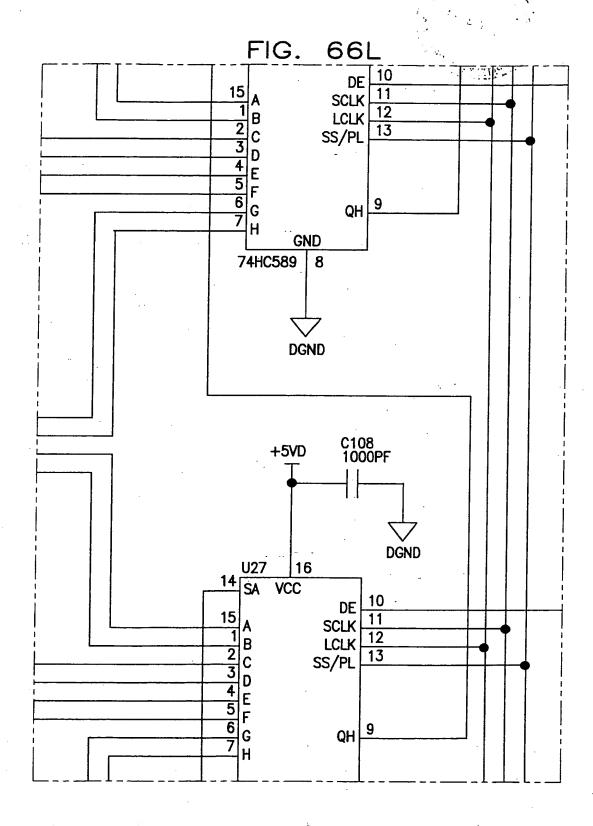
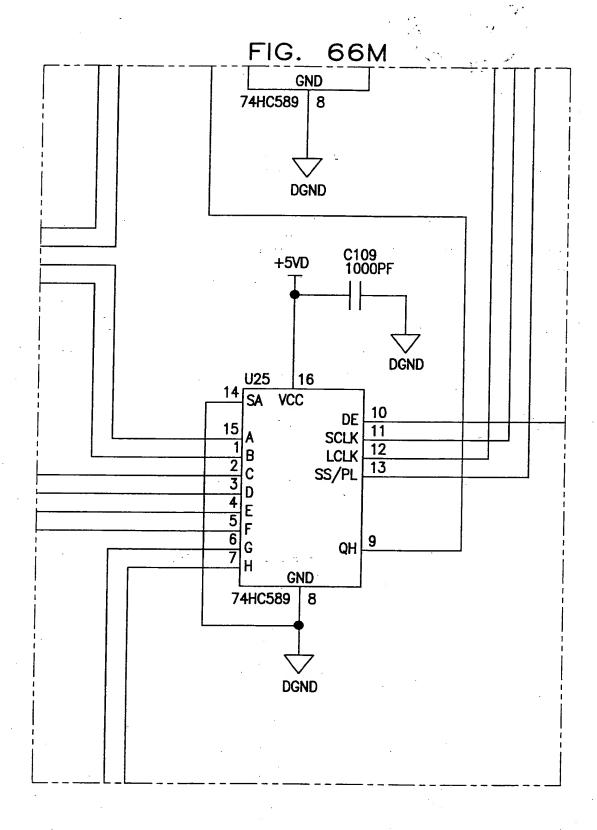


FIG. 66J









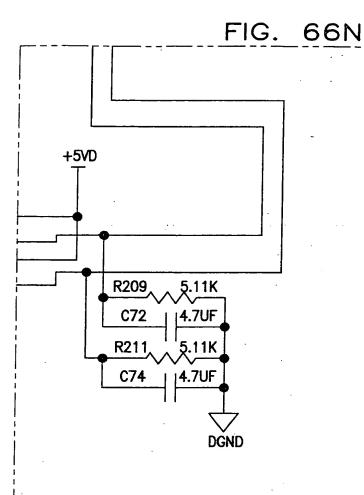
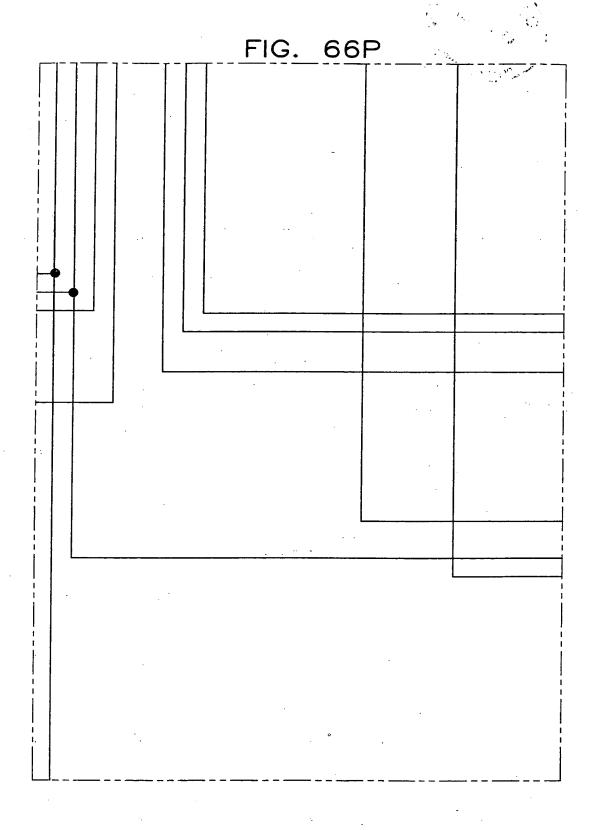
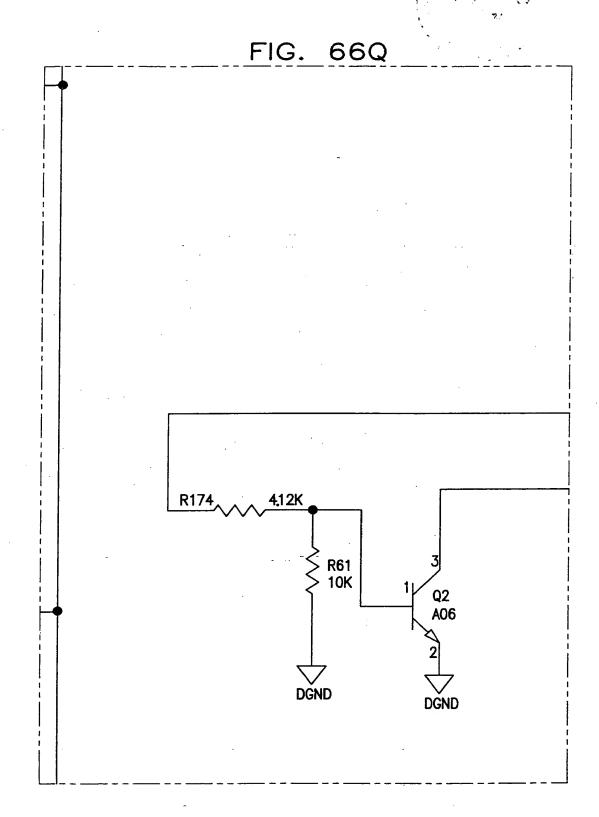


FIG. 660





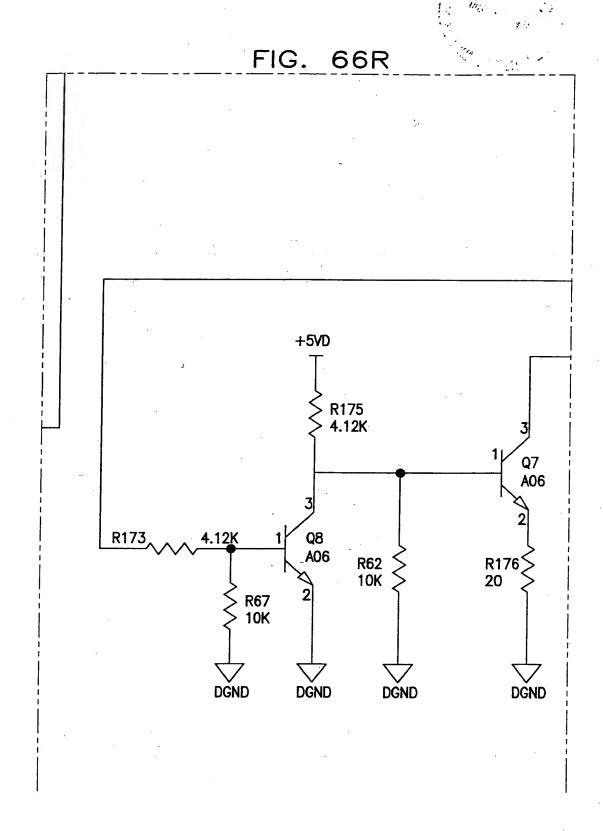
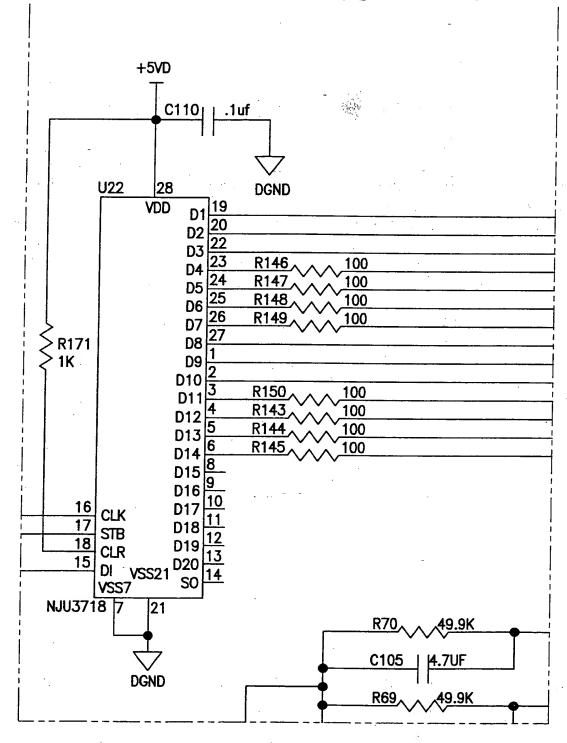
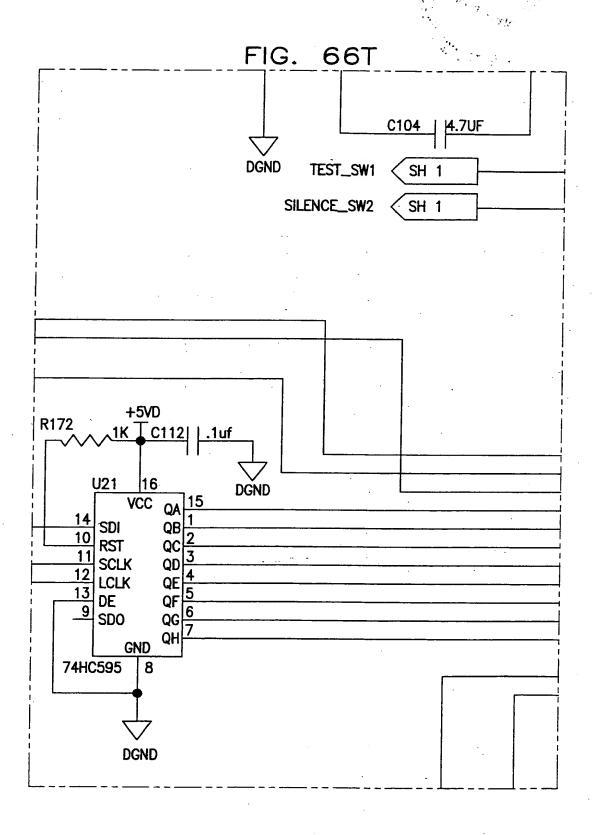
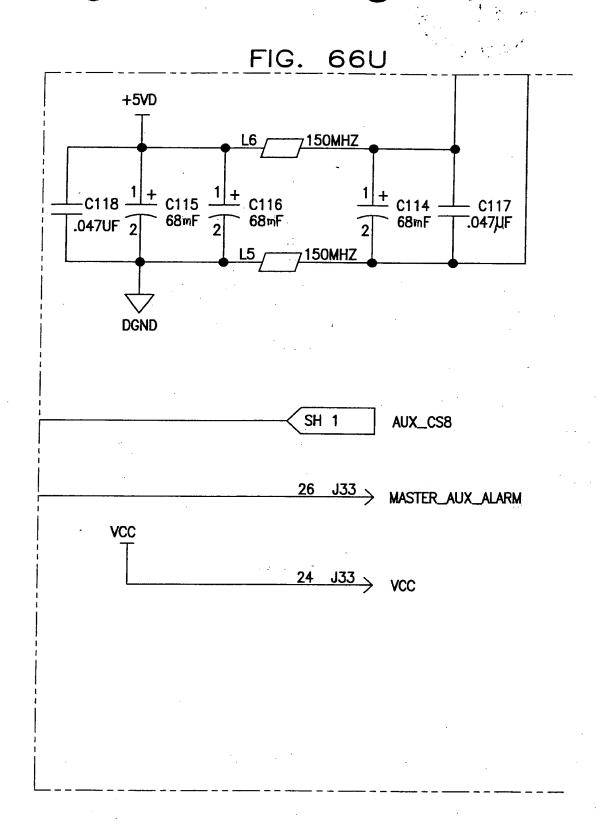


FIG. 66S









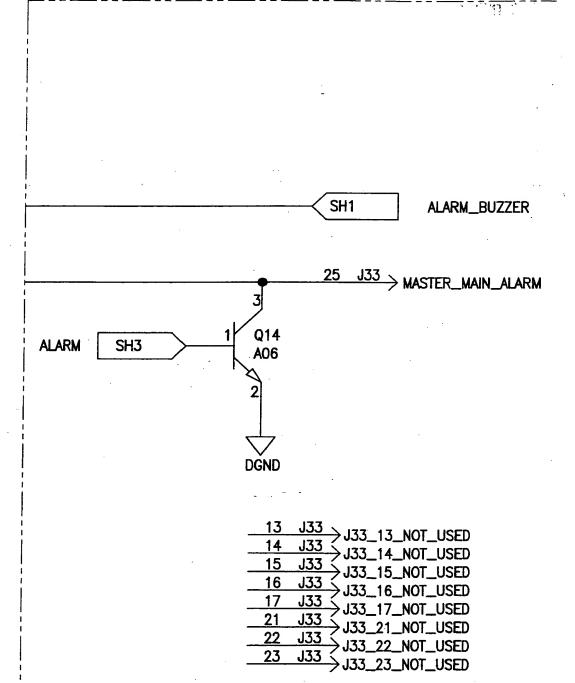


FIG. 66W

	PIN CONN	NNECT							
	AREA LED #	GREEN	RED						
	1	1-4	1-7						
	2	1–8	1–9						
	3	1-17	1-18						
	4	2-4	2-7						
· ·	5	11-8	11-9						
TO OVERLAY	6	11-17	11-16						
TO OVEREAT	7	3-4.	3-7						
	8	10-8	10-9						
1 J46 ADEA 1 2 7 JED COM	9	12-15	12-16						
2 MG AREA_1_Z_3_LED_COM	<b>.</b>	12-13	12-10						
3 JA6 AREA_4_LED_COM									
A MEA_/_LED_COM	<b>.</b> .								
7 IA6 AREA_I_4_/_LED_GREEN									
AREA_I_4_/_LED_RED									
O M6 AREA_Z_3_O_LED_GREEN									
10 JA6 AREA_Z_5_0_LED_RED									
11 MG AND COM									
12 IA6 AREA_5_6_LED_COM									
15 IAG AREA_9_LED_COM		•							
16 JAG AREA_9_LED_GREEN									
17 MAG AREA_O_9_LED_RED									
18 146 AREA_J_O_LED_GREEN			•						
AREA_3_LED_RED	•								
+5VD		•							
T	-								
> 0.70									
> R170									
> 1K 5 J46									
3 0+0	(TEST+_SW1								
6 J46									
0 040	(TEST_SW1								
, , , , , , , , , , , , , , , , , , ,		FROM OV	ERLAY						
15 040	(SILENCE+_SW2								
14 146	•	•							
<del> </del>	(SILENCE_SW2								
LL_L									

## FIG. 66X

```
> VFD_ENABLE
        > VFD_RS
    J45
        > VFD_RW
    J45
        > DDO
 8
    J45
         DD1
 5
    J45
        DD2
    J45
                            TO VACUUM FLORESCENT DISPLAY
        DD3
        DD4
    J45
        DD5
    J45
        DD6
 2
    J45
        DD7
11
    J45
        > J45_3_NOT_USED
14
    J45 <
        → D+5
    J45 DCOM
13
```

## FIG. 67

	·			FIG.	67E	FIG.	671	FIG.	67M				
	FIG. 67A	FIG.	67B	FIG.	67F	FIG.	67J	FIG.	67N	FIG.	670	FIG.	67T
-		FIG.	67C	FIG.	67G	FIG.	67K	FIG.	670	FIG.	67R	FIG.	67U
		FIG.	67D	FIG.	67H	FIG.	67L	FIG.	67P	FIG.	67S		

FIG. 67A

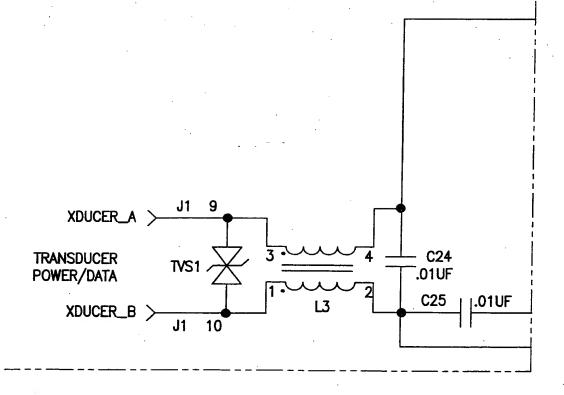
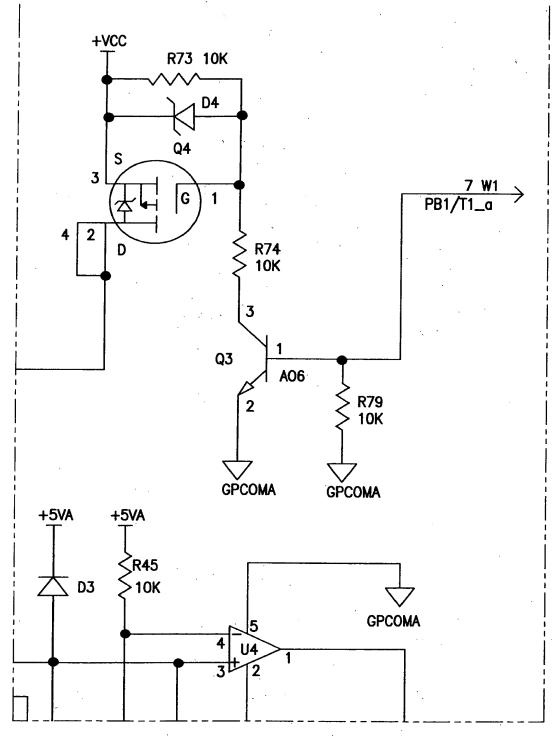


FIG. 67B



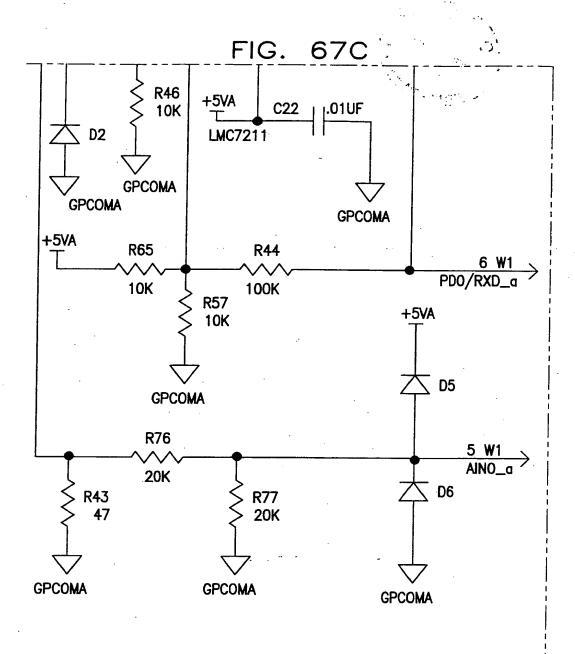
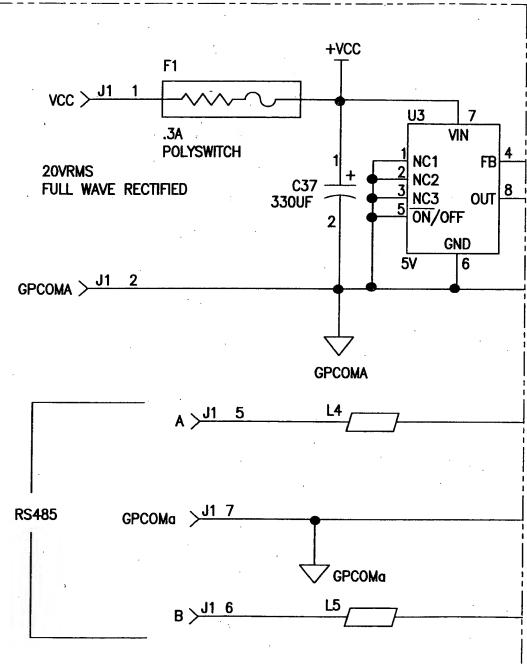


FIG. 67D



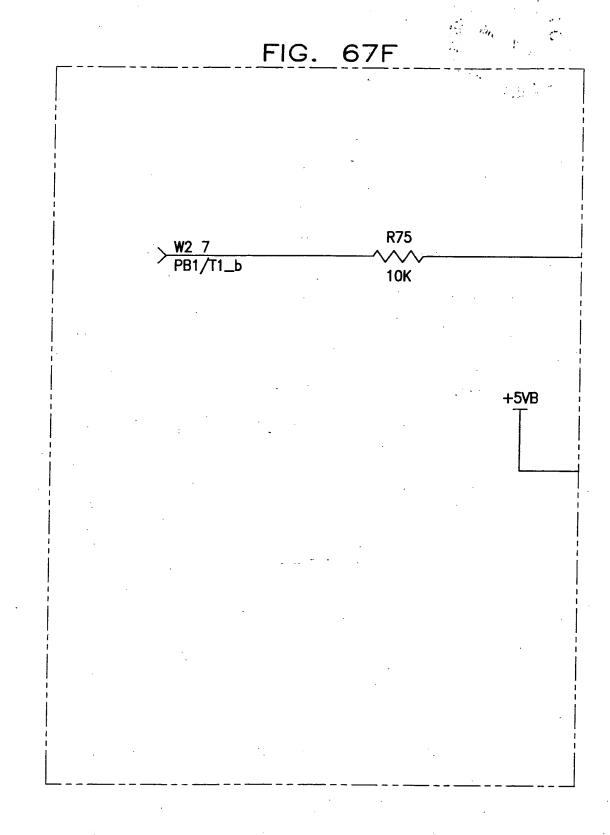
## FIG. 67E

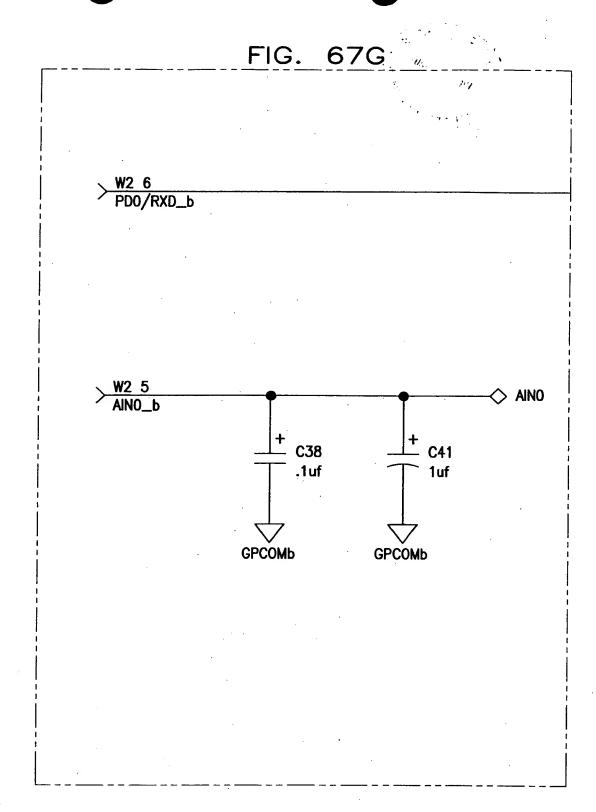
AUX\_ALARM > J1 3 10W1 AUX\_ALARM\_A

MAIN\_ALARM 9 W1

MAIN\_ALARM\_A

GUARDED\_ACCESS > J1 8 GUARDED\_ACCESS\_A SUBJECT | GUARDED\_ACCESS\_A





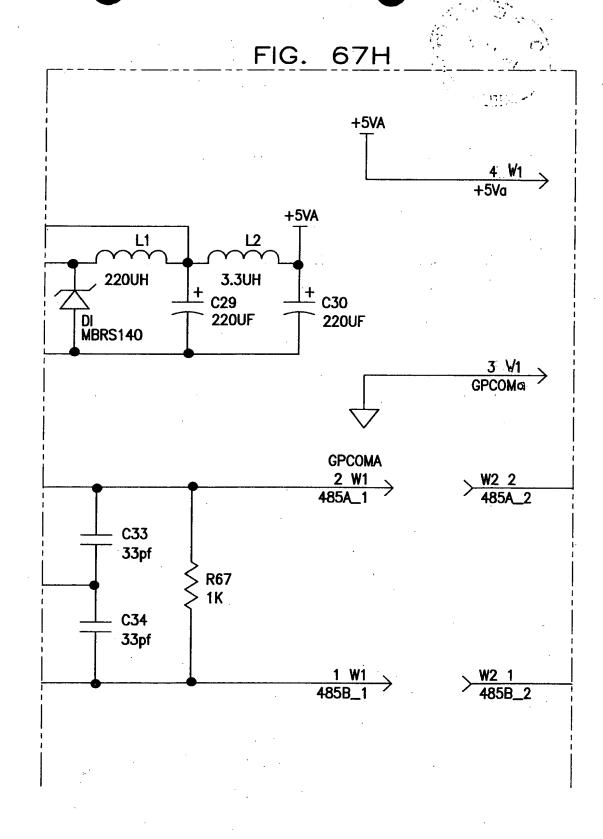
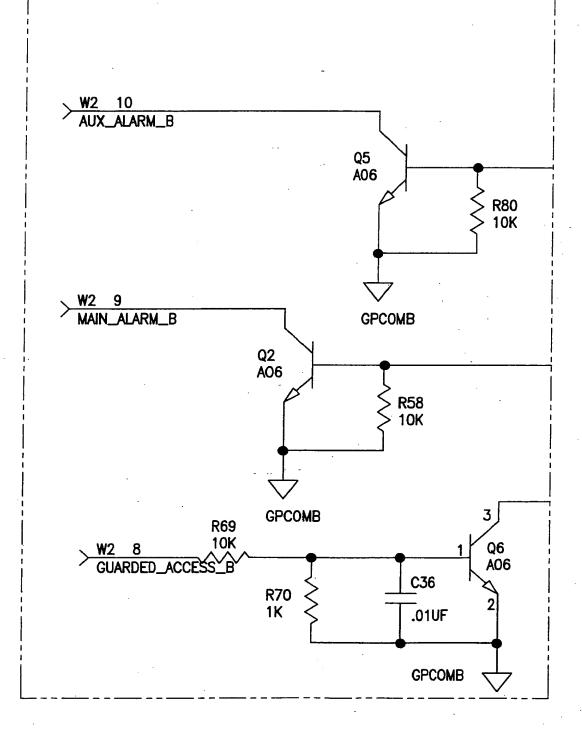
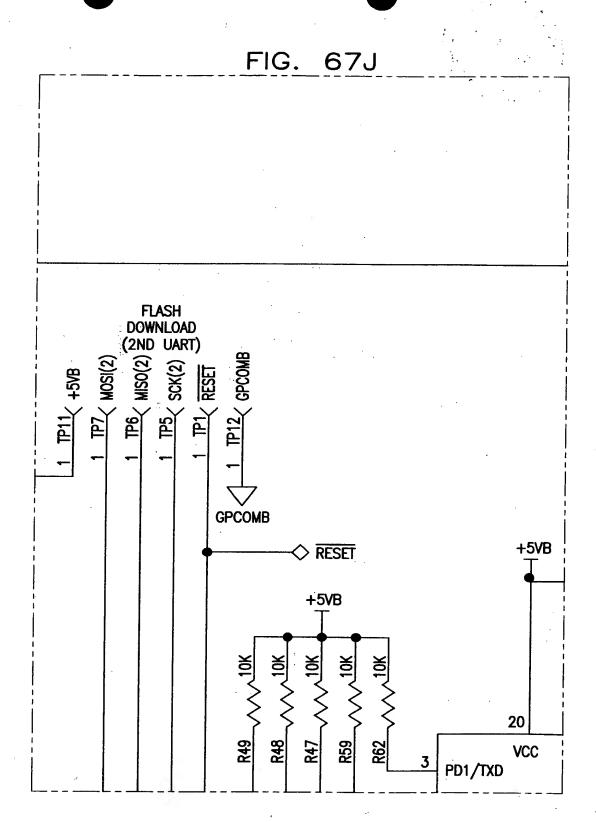
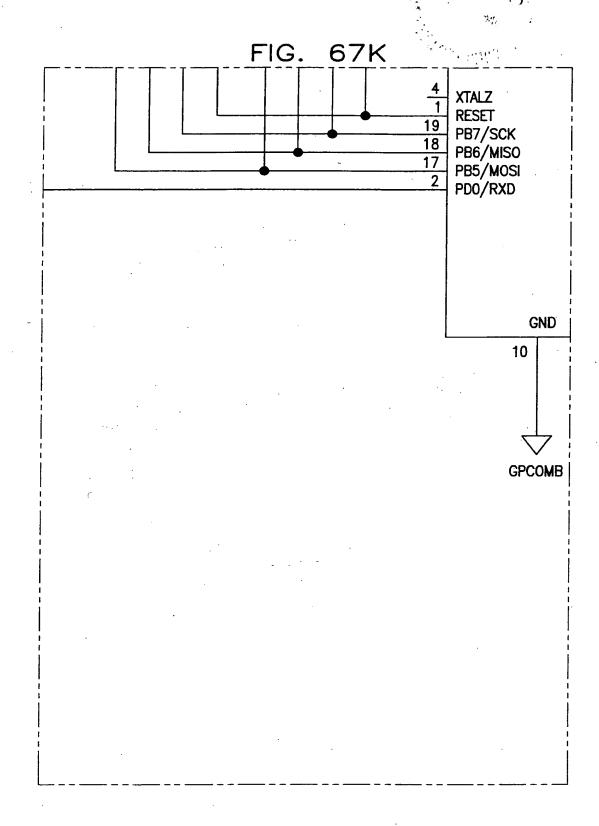


FIG. 671







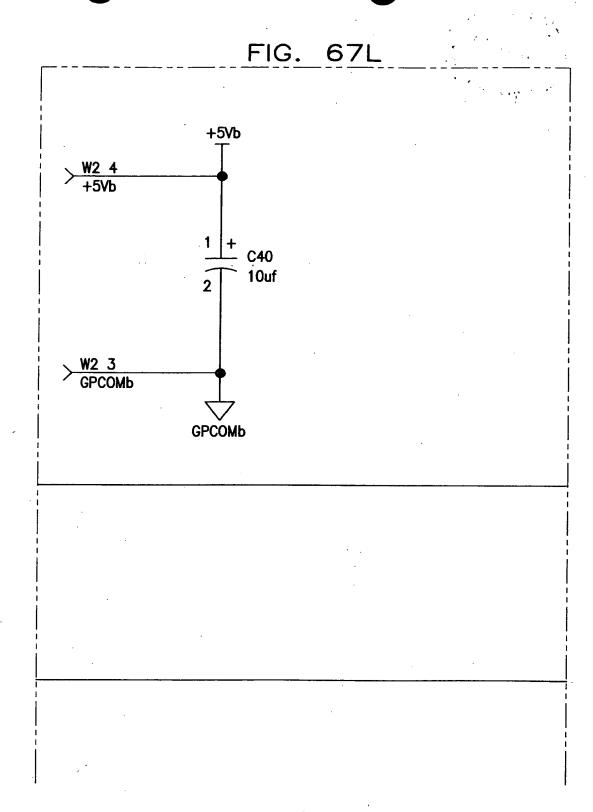
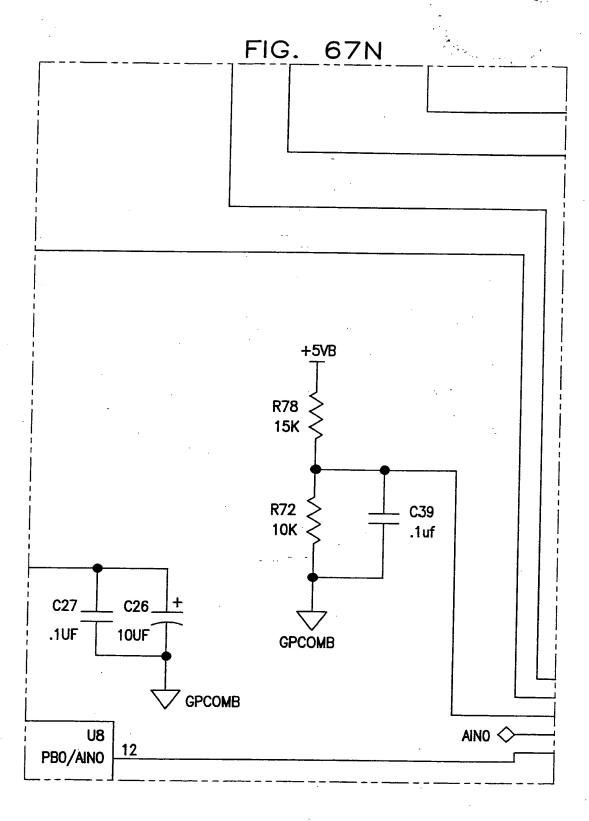
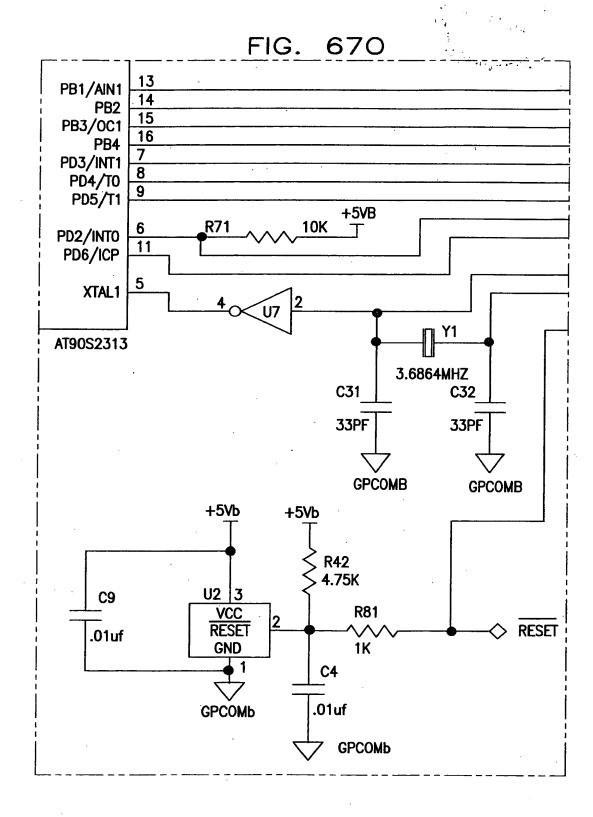
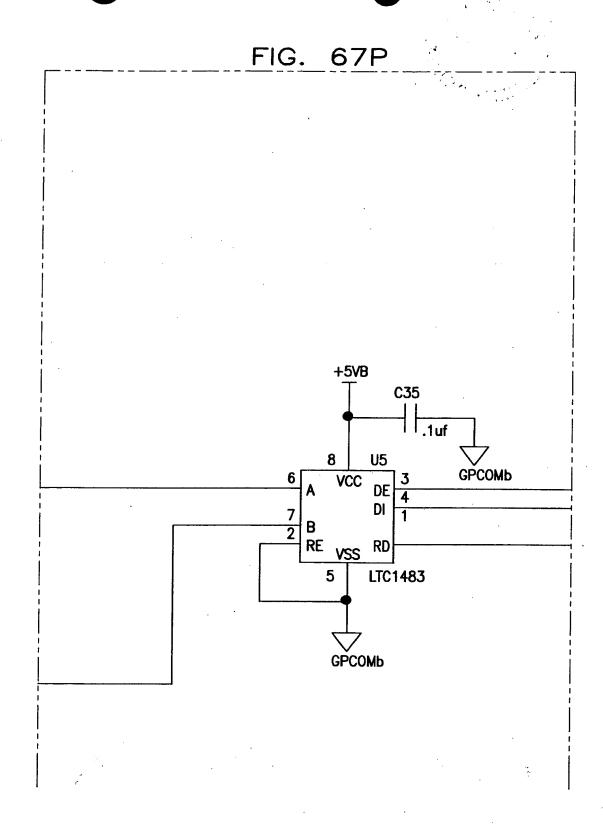


FIG. 67M R60 2K R68 2K +5VB R66 10K



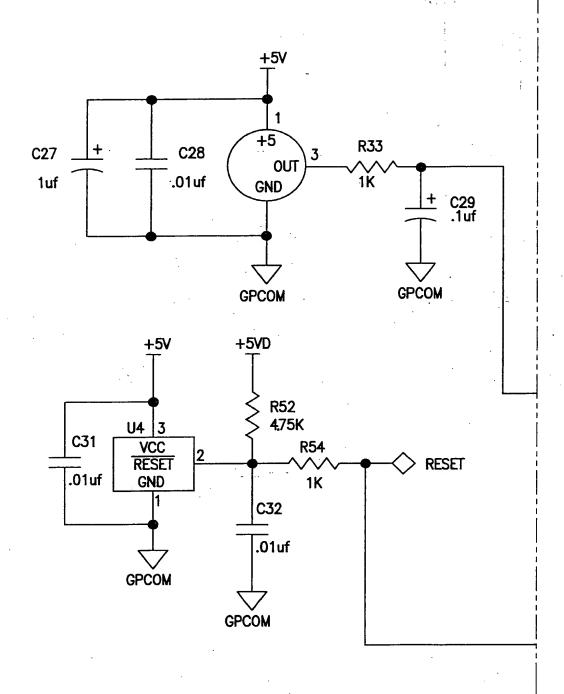




## FIG. 70

FIG. 70A	FIG. 70C	FIG. 70E	FIG. 70G	FIG. 701
FIG. 70B	FIG. 70D	FIG. 70F	FIG. 70H	FIG. 70J

FIG. 70A



## FIG. 70B

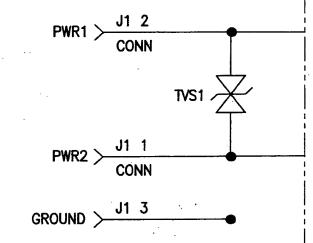
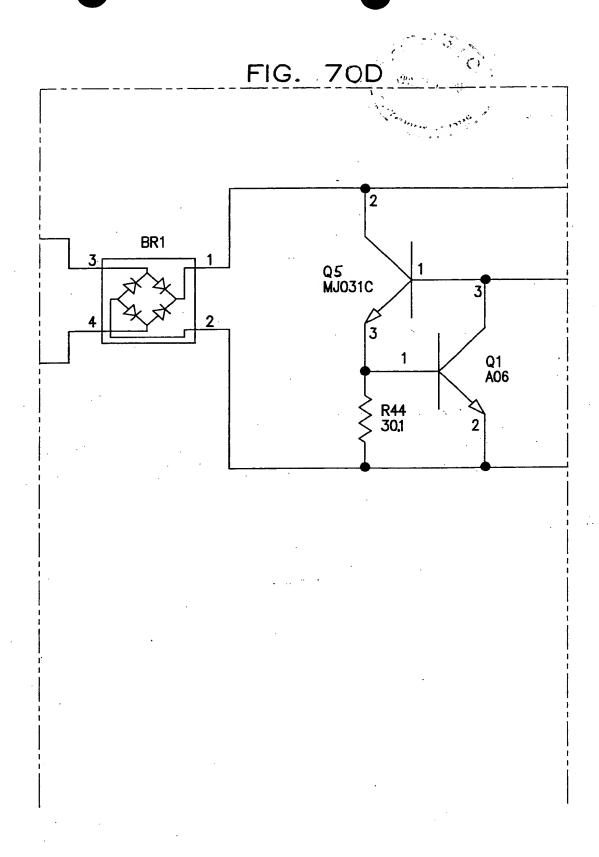
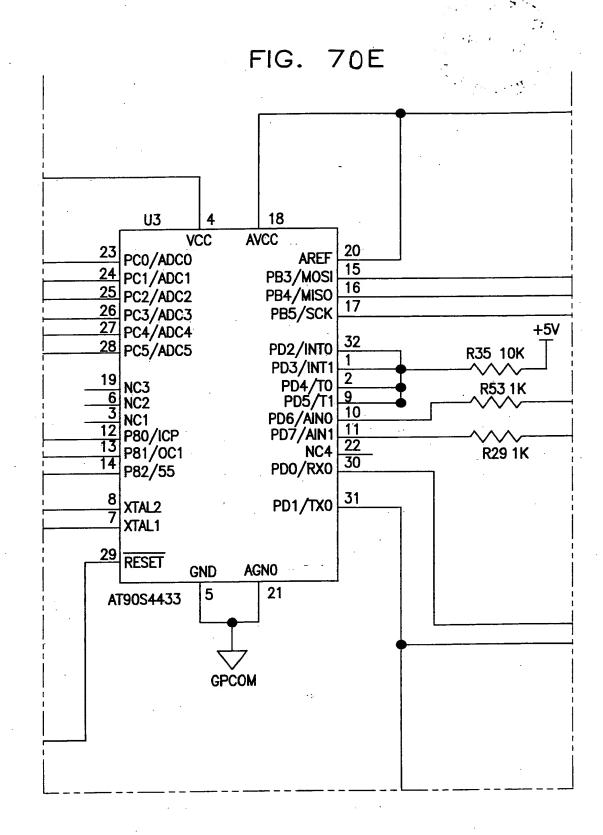


FIG. 70C +5V C17 C16 .1uf 10uf <u>+5</u>V R21 GPCOM 10K +5V R41 10K 8MHZ Y1 C12 C11 33pF 33pF **GPCOM GPCOM** 





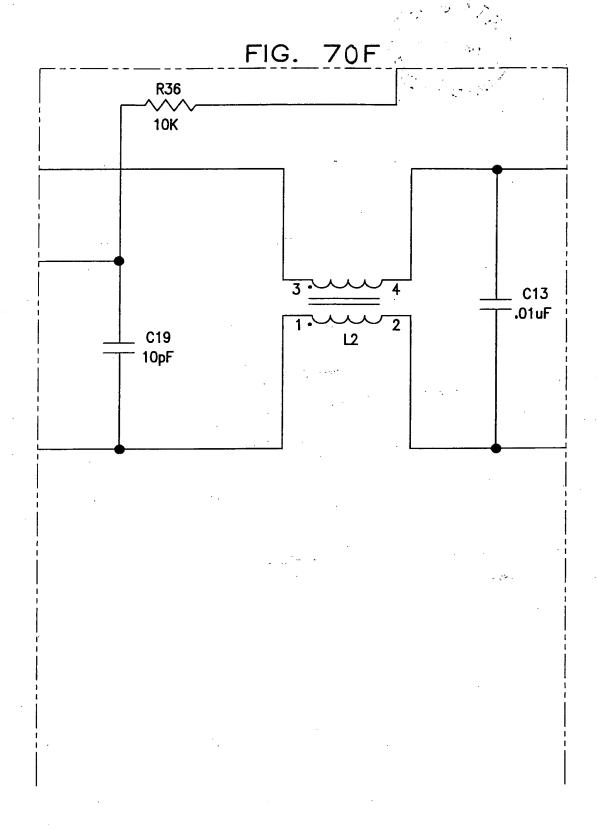
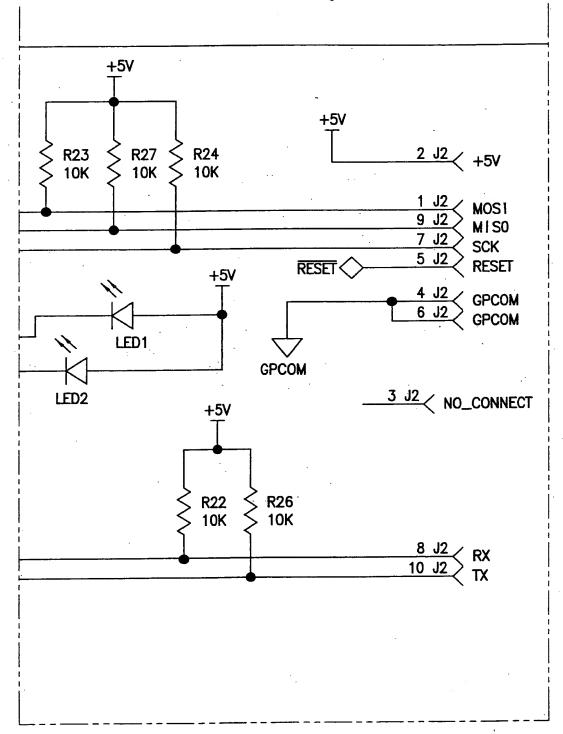


FIG. 70G



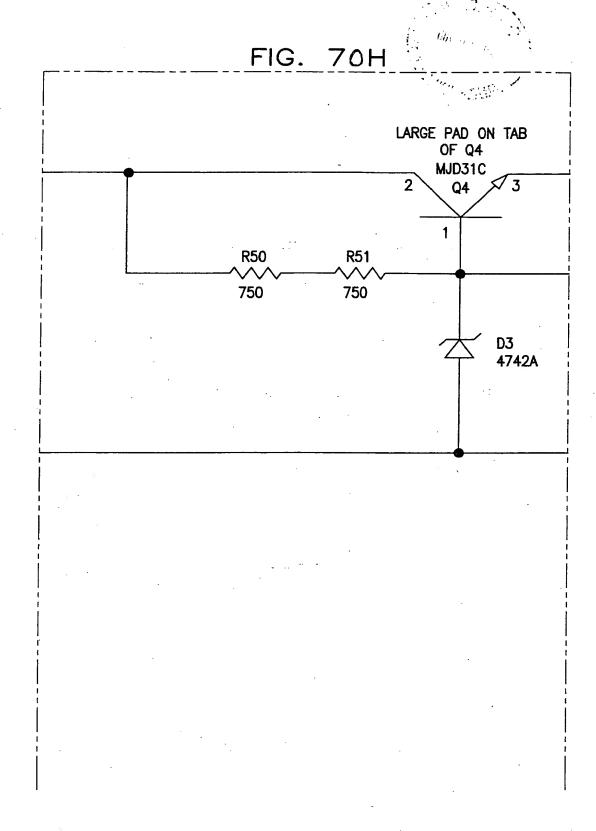
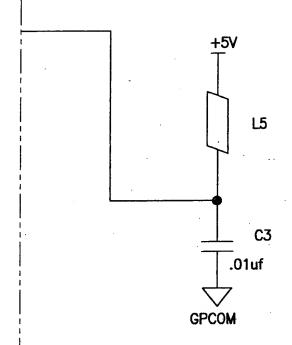


FIG. 701



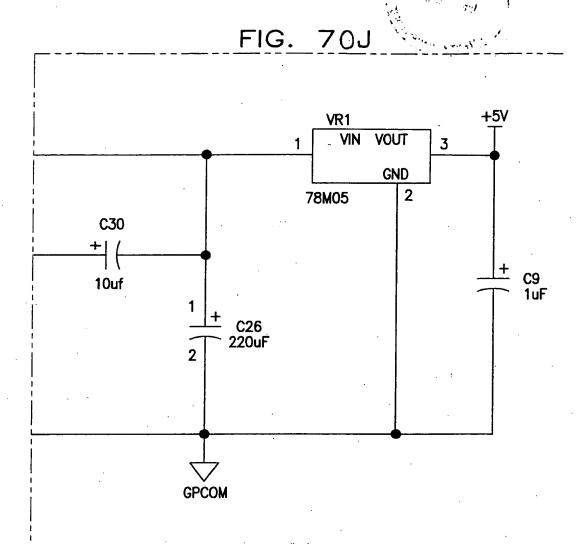
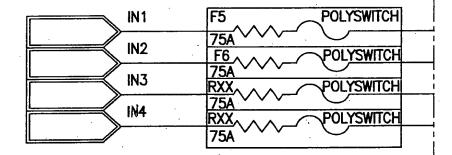


FIG. 71

FIG. 71A	FIG. 71B	FIG. 71C	FIG. 71D

FIG. 71A



ACGND

FIG. 71B MOVXX V42MLA MOVXX V42MLA MOVXX V42MLA MOVXX V42MLA

FIG. 71C

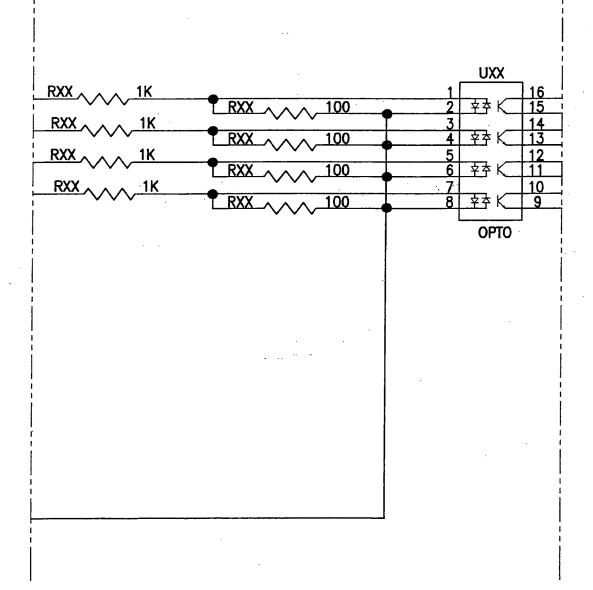
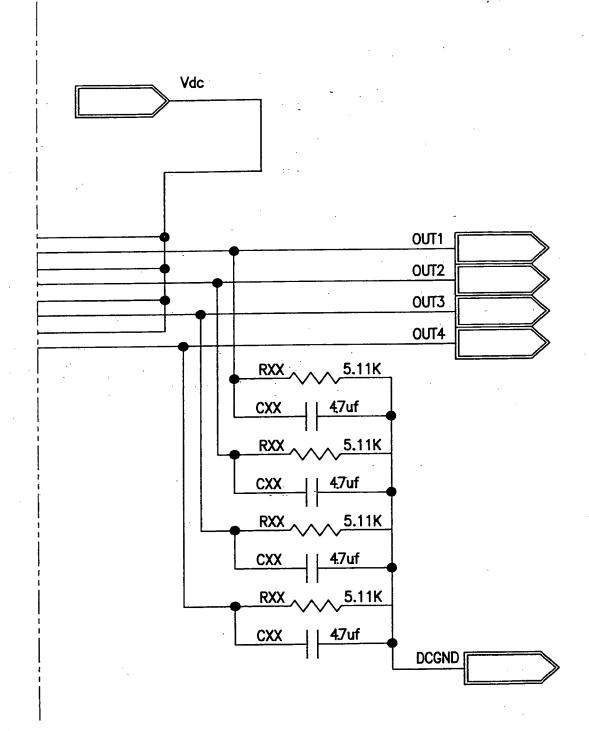
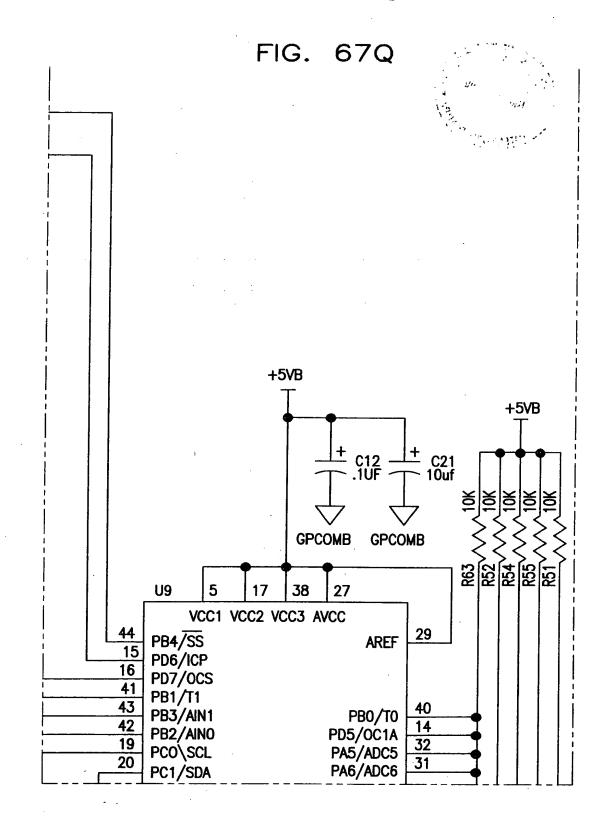
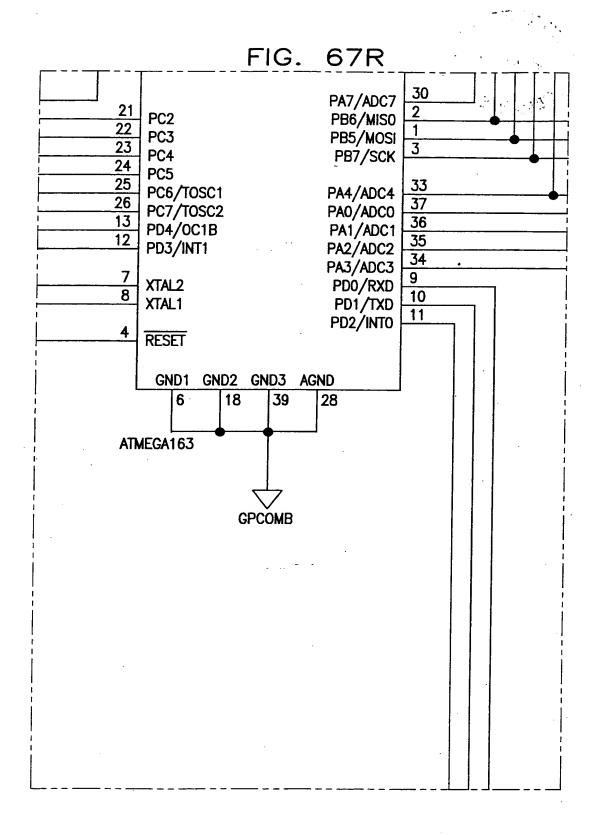


FIG. 71D







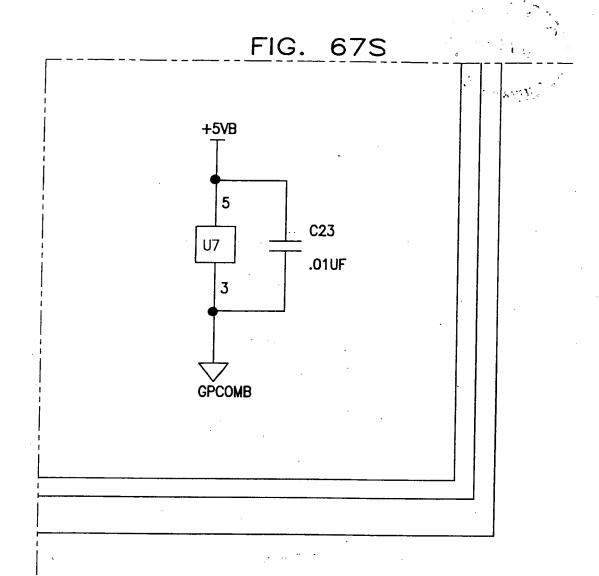
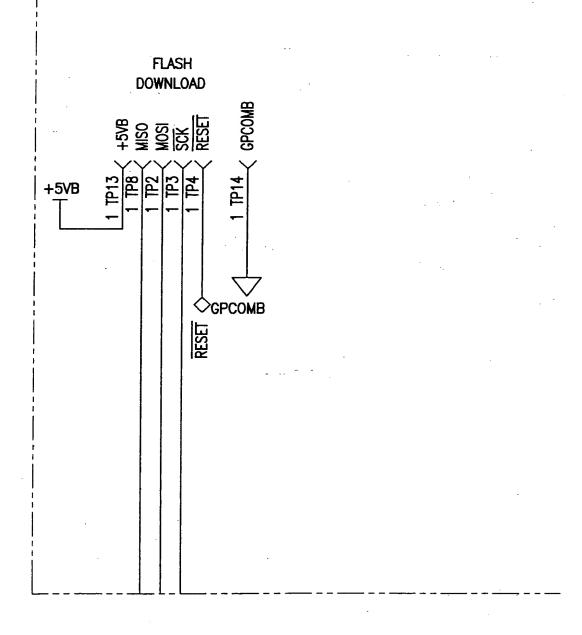


FIG. 67T



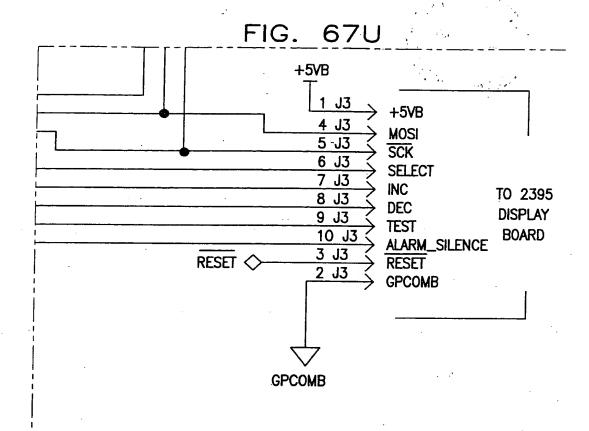


	FIG. 68B	FIG. 68 D	FIG. 68F	FİG. ∕ <b>6</b> 8H	
FIG. 68A	FIG. <i>6</i> 8C	FIG. 68E	FIG. 68G	FIG. 681	FIG. 68J

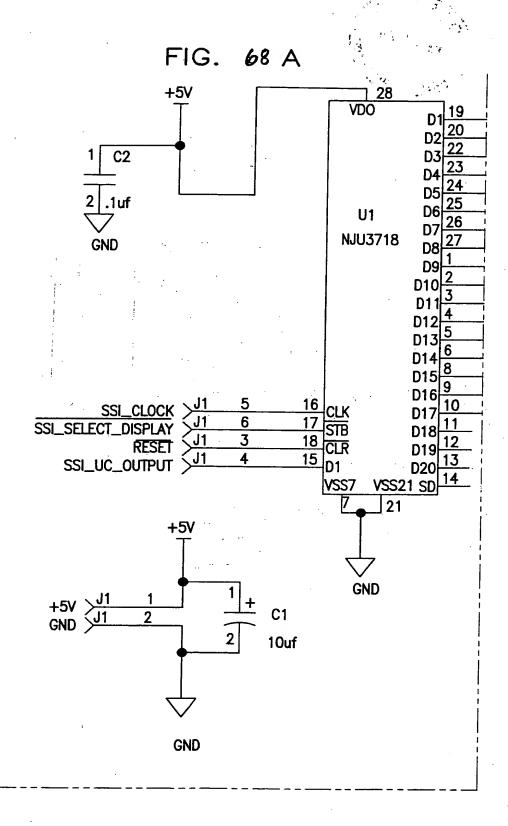
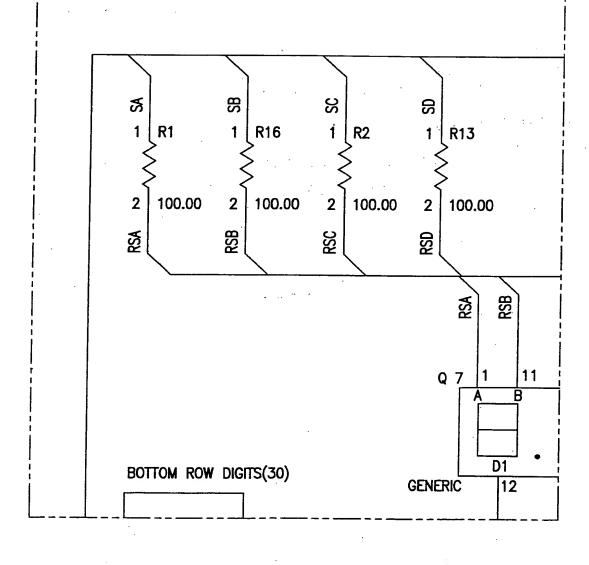


FIG. 68B



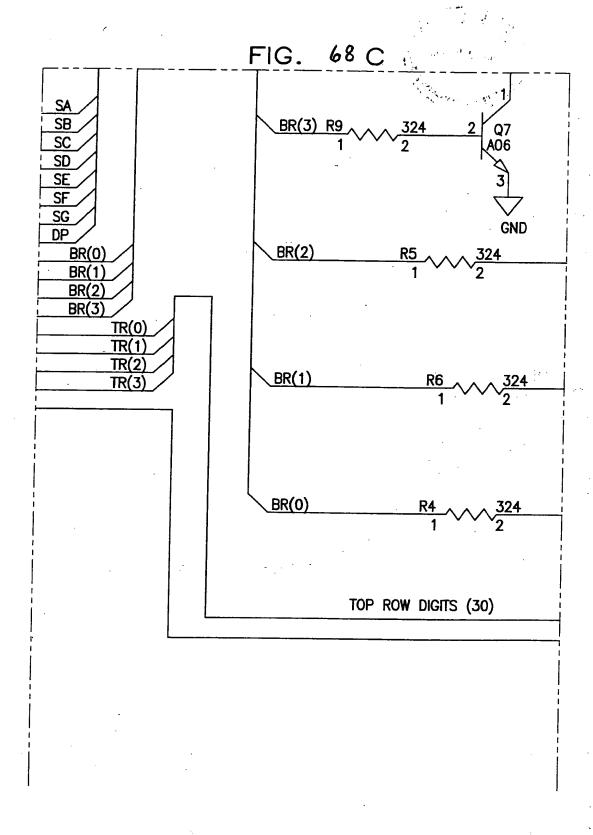


FIG. 68 D SS 띴 Ŗ 1 R10 R3 R7 2 100.00 100.00 2 100.00 100.00 RSG RDP RSE RSF RSB RSG RSC RSO, RSE RSF 3 Q 6 8 10

DP

D4

D3

8

D2

D1

GENERIC

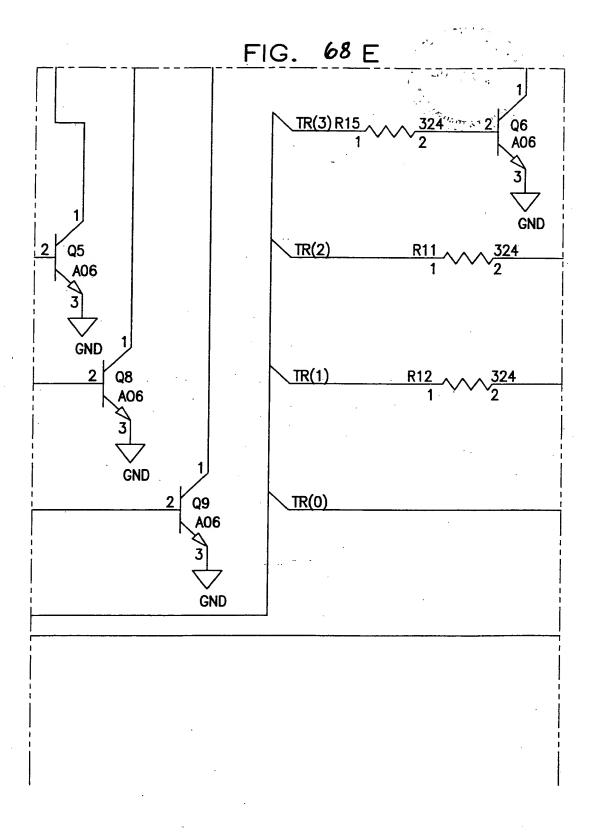
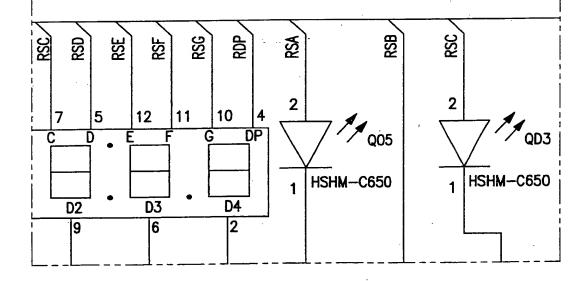


FIG. 68 F



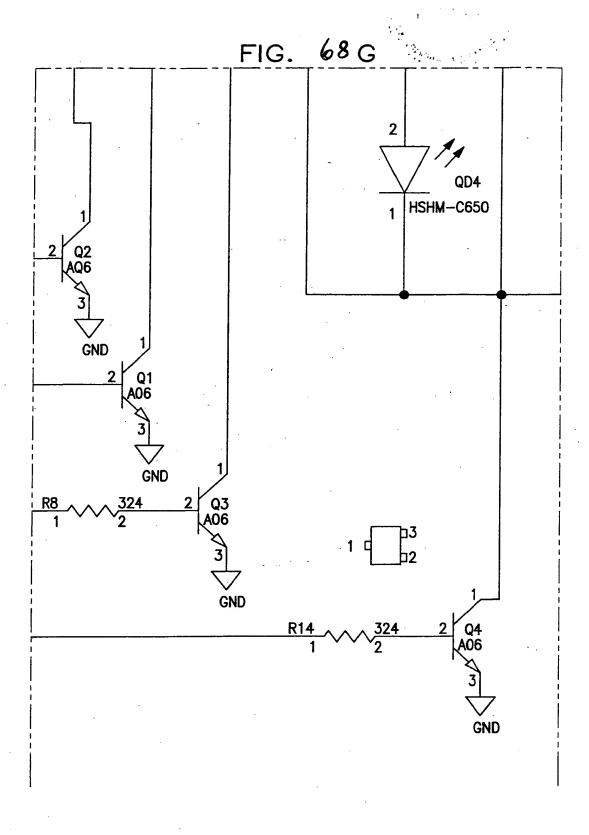
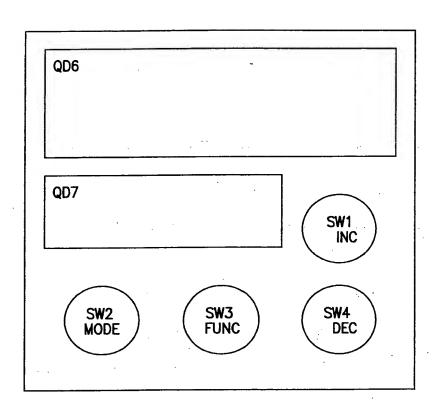
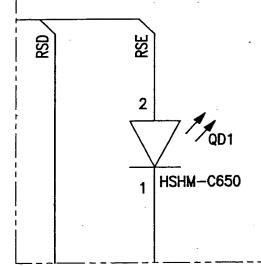
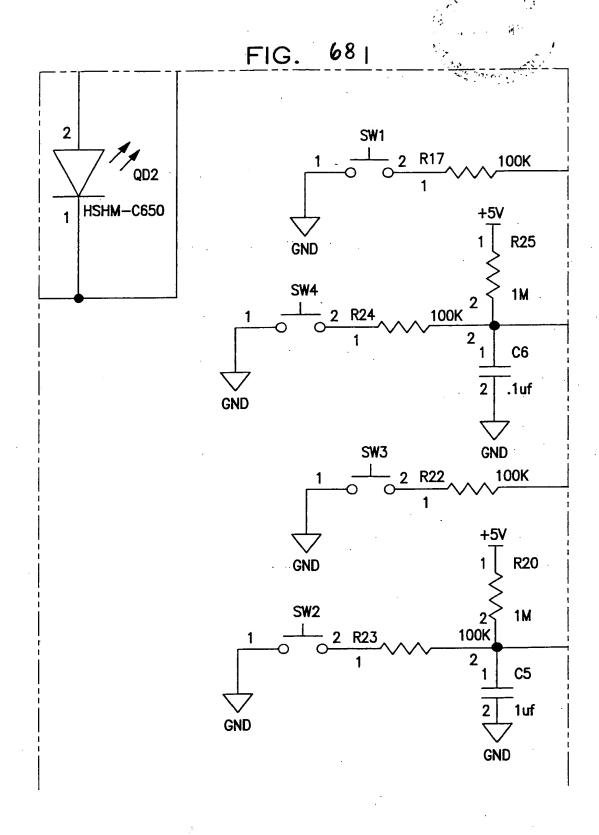
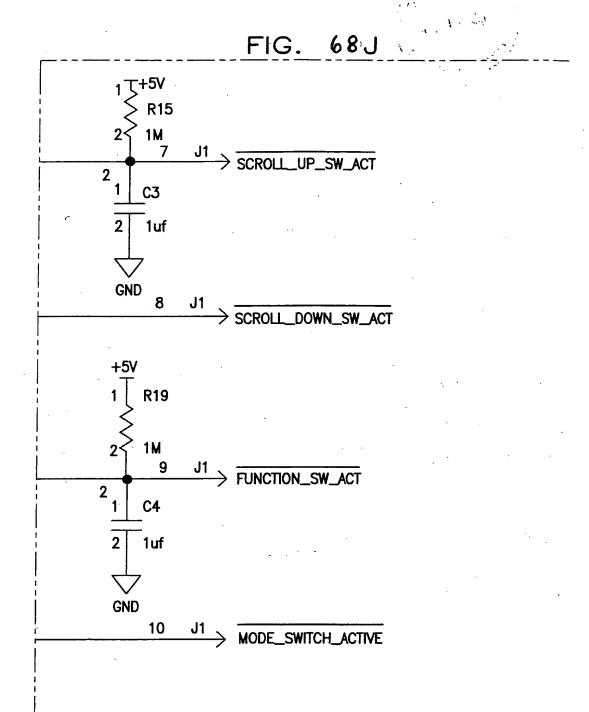


FIG. 68 H





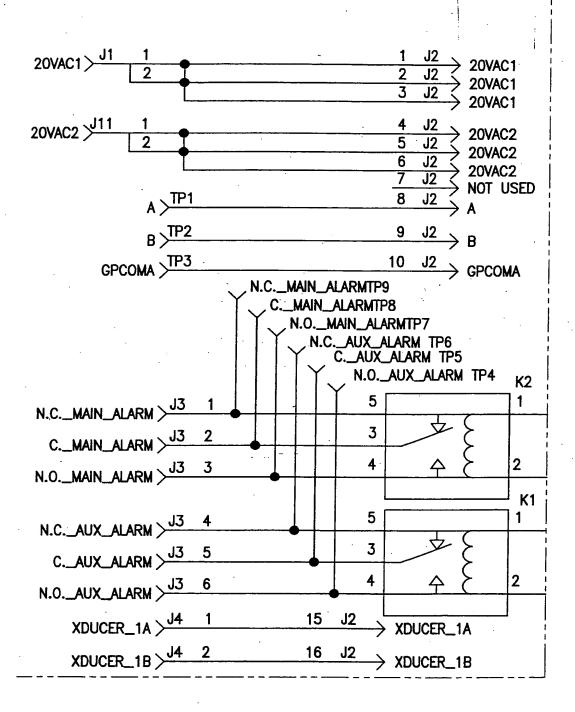




## FIG. 69

FIG. 69A	FIG. 69C
FIG. 69B	

FIG. 69A



## FIG. 69B

